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THE ASIATIC REVIEW

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1924

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THIRTY-EIGHTH YEAR.

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THE

ASIATIC REVIEW

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Call No. THE INDIAN ELECTIONS AND AFTER



25511 BY STANLEY RICE

By an unexpected turn of Fortune's wheel the General Election in England coincided with the elections in India. The chance has thrown into greater relief the contrasts and similarities which exist in the Constitution and which are revealed by the results. The outstanding difference in the Constitution is that whereas the British election has brought about, or will bring about, the fall of the Government in power, the Government in India is irremovable and is uninfluenced by the polls. Both countries have their permanent officials, but in India the permanent officials, including the Viceroy, who in some aspects corresponds to the Prime Minister, are the Government, and the return of a large minority pledged to make government impossible creates a position of great difficulty. The British election was contested upon a definite constructive programme and upon an appeal to a wide franchise; in India the franchise is very limited, and no Indian party can be said to have a constructive programme. The Swarajists' ideal is definitely destructive; they propose to wreck the Councils and to expose the weakness of the Reforms, but beyond pious aspirations that this policy will hasten the attainment of complete self-government they have suggested nothing to take the place of the present régime. The Moderate programme is hardly less nebulous. They too ardently desire full Dominion status, but they cling to constitutional methods to attain their object and believe that by supporting the Government, while retaining independence of action in specific cases, they can best show

the general fitness of the country to govern itself. There is here a marked clash of temperaments. It was the weakness of the Liberal party in England that they had no constructive policy of their own; though they gained seats it was because the electorate were frightened by the bogey of a fiscal experiment, and in consequence of their own poverty they were driven to adopt the old plan of "abusing the other fellow's attorney." The Indian electorate do not trouble about practical details. They seem to have been dazzled by the vision of Swaraj, somehow to be obtained by these tactics, just as they were carried away by Gandhi's illusory promises of "Swaraj within a year."

On the other hand, the results have shown a striking similarity to those in England in that there now exist three definite parties within the Councils, none of which is strong enough to rule under the existing Constitution without the support of one of the other two. It is of course true that in some respects the Indian Constitution has the advantage over the British because government by a minority, if difficult, is not impossible. In a large and important group of subjects the Indian Government is not dependent upon the vote of the Assembly, and important legislative measures can always be passed by the device of "certification." But there remains another important group under the control of ministers responsible to the Assembly, and there is a limit to the use of "certification," inasmuch as the Viceroy and the Provincial Governors cannot afford to be in direct conflict with their Councils. In fact the Swarajists have openly declared that one of their objects is to force government by "certification," in order to show that the so-called advance towards democracy is really a sham, and that in the last resort the Government has become more autocratic than ever. Above all, financial stability is the key to the situation. The difficulty of balancing the Budget in the past put more power into the hands of the Legislative Assembly than was originally contemplated. The Assembly used the unexpected chance to drive bargains, and in spite

of the obvious deficit forced the Viceroy to the disagreeable necessity of certifying the salt tax.

There is no denying that the Swaraj party have achieved a considerable success at the polls. Out of the 105 elective seats in the Assembly they can count on about a half, if, as is probable, the Independents vote with them. More significant still, they have in several constituencies displaced stalwart supporters of the Government, of whom the veteran Surendranath Banerjee may be taken as a typical example. In their desire to wreck the Councils and to make government impossible they have always been consistent, but whereas Gandhi hoped to gain his end by rigid non-co-operation, thereby making the Councils ridiculous because unrepresentative, Mr. C. R. Das's party is bent upon a more aggressive campaign and a more vigorous onslaught.

It is a notable success, but it is not enough. In addition to the 105 elected seats, there are forty members nominated by the Government, so that in a full house the Swaraj party can claim the votes of rather more than a third. Nevertheless, their entry into the Councils cannot but accentuate the delicacy of the Government position. Apart from the use of the certifying power, it is a thankless and an unpopular task to have to force legislation through the Chamber in the teeth of a determined opposition. Politics after all are regulated not so much by votes as by tendencies and impressions, and the spectacle of forced majorities is not inspiring. On the other hand, the success of the Swarajists will probably compel the Liberals, as the Moderate party is now called, to adopt a more definite line of policy than they have hitherto done. Much indeed depends upon their attitude. They are as bent upon the attainment of Dominion status as the most extreme Swarajist, but they have a clearer conception, not only of the difficulties in the way, but also of the sheer impossibility of taking over the whole administration, including Foreign Policy and National Defence. Hitherto they have followed

constitutional lines in the prosecution of their object, though they, like their more extreme countrymen, have shown impatience with the rate of progress. The choice before them is now either to join hands with the Swarajists in the fantastic idea of forcing the hand of Parliament by obstruction, or to remain true to their own convictions by supporting the Government and refusing to join in a purely wrecking policy. There will no doubt be occasions, as past events have shown, when the Liberals and the Extremists will combine to defeat an unpopular measure, but isolated action must be distinguished from the deliberate adoption of a policy. No one, however, can doubt what their choice would be if they have political courage, but violent methods have in the past reacted upon the more timid, and may do so again. Whole-hearted support of the Government, by which the administration might be carried on smoothly and the Extremist plans frustrated, might in the present temper of the electorate result in political ostracism, and the Liberal party is bound in common sense to look ahead. Nevertheless, there is nothing so demoralizing to a party in the State, nothing more calculated to reduce it to impotence, as the want of a definite line of action. If the Liberals do not make a real stand for the principles which they have always avowed, they run the risk of being dragged at the chariot wheels of triumphant Extremism, and that road leads to political extinction.

But if the position of the Government and the Liberals is delicate, the path of the Swarajists is not altogether free from embarrassment. The National Party is divided. There is at least a strong contingent which clings tenaciously to the complete Gandhi programme of boycott and is looking upon this new experiment with suspicion, to use no harsher word. It is rumoured that the Swaraj party may have to sustain an attack in force upon their policy; the meeting of the Congress promises to be lively, if not crucial. Moreover, the Swarajists' single aim, as has already been said, is to make the Councils unworkable. If they fail to redeem their spectacular promises, they are to

that extent discredited and their cause may sputter out through the force of an anti-climax. The accession of the Muslim element to the Hindu cause has been discounted by the Lausanne Treaty and the restoration of Turkey to a state of sovereignty, while the attitude of Turkey herself to the Caliphate question can hardly be encouraging to the more intense devotees of Islam. There is, of course, a certain section to whom the Swaraj cause was always paramount and who merely used other disputes as sticks wherewith to beat the Government, but the Hindu-Muslim entente shows, as a whole, signs of cracking, if not of complete disruption. India is a country where enthusiasm is easily stirred and as easily fades away when there are no apparent results. Words have extraordinary power to rouse, but you cannot go on indefinitely feeding the people with wind, and the comparative failure of the Gandhi programme is a witness to the fact. If then there be failure in the Councils, a good deal of fanning will be required to keep the flame healthily alive.

The best chance the Extremists have is, without doubt, in the Provincial Councils, particularly in Bengal and the Central Provinces, though they muster strong in Bombay also. In Bengal they have a working majority, and the remainder is made up of such various elements that it is certain to contain all the weakness of a coalition, even if the component parts can be got to work together. Lord Lytton has been hard put to it to form any kind of Ministry. It was of course inevitable, that true to British procedure, he should invite Mr. C. R. Das to form a Ministry, and it was equally inevitable that Mr. Das would refuse. To have accepted would have been treachery to his own principles and to his own platform. In the Central Provinces much the same position exists, though the Province is not of the same importance. It is possible that legislation in these Provinces may result in an absolute deadlock.

But if they do manage so to obstruct work as seriously to hinder legislation—a state of things which in the Assembly

at any rate seems very improbable—they will only drive the Government into devising measures for overcoming the difficulty should the safeguards already provided prove insufficient. If the worst comes to the worst, it is always possible to suspend the Constitution. Mr. Lloyd George roused considerable alarm in India when he spoke of the reforms as an experiment. Yet he spoke the literal truth. It is indeed difficult to see how a perfectly novel form of government, untried either in India or anywhere else, can be regarded as anything but experimental. The scheme has been so framed as to permit elasticity and progress in accordance with the pronouncement of August 20, 1917. But how is progress to be obtained by obstruction? and how does a mere wrecking policy help to demonstrate the fitness of India to govern herself? One thing is certain. No party in England, whatever be their Indian proclivities—least of all, perhaps, the Labour Party—is going to be bullied by noisy demonstration or obstructive tactics into granting anything more than appears expedient.

It is a hopeful sign that the polls have been double and treble those at the first election. The added interest may no doubt be ascribed in part to the more lively contests due to the candidature of non-co-operators, but we are entitled to hope that the experience of the last three years has awakened a deeper interest in the elective system. No doubt the franchise has as yet been extended only to a very minute fraction of the population whose voice can in no sense be regarded as the voice of India. But political consciousness must filter down from the more to the less educated, and there are unmistakable signs, as Sir T. B. Saprú pointed out in the October number of the *ASIATIC REVIEW*, that the illiterate masses are not quite so negligible as they have been assumed to be in the past. The Indian peasant is a shrewd fellow enough in all that concerns his personal interests, and all accounts from India agree that the masses have been stirred by recent events as never before in history.

NOTE

WITH reference to Sir T. B. Saprú's article mentioned by Mr. Rice on the last page, the editor has just received the following criticisms in a letter from India :

The very able, temperate, and brilliant article in the October issue of the *ASIATIC REVIEW*, written by Sir Tej Bahadur Saprú, on the coming election in India is certainly convincing on the one point—that like so many highly-educated Indians, he cherishes erroneous views as to the real feelings and opinions of any but the "infinitesimal fraction" of the "intelligentsia" with whom he has chiefly come into contact. Lest he should number me amongst the writers who "went to India thirty or forty years ago and cannot adjust themselves to the new situation," I may say that I have been born and educated in the country, and have been working for fifty-two years in India and Burma, and come into contact with many thousands of Indians of all sorts and conditions, amongst whom I have many intimate friends of all political complexions who speak their real minds to me freely.

Like all who have met Sir Tej Bahadur, I have the highest respect for his ability and integrity, and it is with reluctance (but with no doubt or diffidence) that I claim, judging from what he has written, to judge the situation better.

With Sir Tej's history of the self-government scheme so far, and his description of the present situation, I have no quarrel on the whole, though it is a serious omission on the part of a statesman to ignore the baneful effects of Gandhi's non-co-operation movement, in encouraging a contempt of law and authority, with its consequent long record of riots, and disturbances, and murders, and dacoities. His classification of the candidates into (1) "Non-co-operators," (2) "Moderates and Liberals," and (3) "Zemindars," is roughly correct, though his idea that the non-co-operators are very much more numerous than the Liberals is turning out to be very erroneous, as the nomination rolls show actually very few non-co-operators' names, and there are numerous candidates of a nondescript kind not belonging ostensibly to any of the three parties. But the fact remains that it will not need any large proportion of avowed non-co-operators to secure seats enough to make it easy for the Dasites to "wreck" the Assembly and the Councils, as is their intention. For the lamentable fact is undeniable that racial feeling, perhaps naturally, dominates 90 per cent. of the intelligentsia, and that the wreckers in making trouble for the British Government will be joined by more than half the Moderates and will easily succeed in destroying the Councils and bringing representative government to a standstill.

That most of the so-called Moderates sympathize with the Extremists

and will certainly support them, is proved to the hilt by the constant pressure brought on the Government, by repeated resolutions and questions, etc., asking for the release of the interned and imprisoned political criminals. A very misplaced sympathy, if the Moderates are in earnest in desiring to work with the British Government for the success of the reforms, to ensure which it will be necessary for them to fight the Extremists tooth and nail and defeat them utterly, of which contest there was no sign at all till quite recently Mr. S. R. Das's "Constitutional party" made its appearance in Bengal. But of the tearing propaganda called for to defeat the Extremists there is yet no sign.

Sir Tej thinks that to suppose the Extremists will successfully wreck the Councils and Assembly is to take a "narrow view of the subject," but gives no valid reasons for the opinion. They can do so, as a beginning, by obstructing any and every proposed measure and passing resolutions which the Government cannot possibly accept, they can quickly "embarrass the Government and paralyse the administrative machinery." If this should happen, Sir Tej thinks "the position will have to be carefully re-examined" in the direction of considering an earlier grant of Dominion Government . . . but surely that is a glaring *non sequitur*; the re-examination can have no other effect, as Lord Reading has plainly expressed it, than the "putting into abeyance of the whole system of representative government" and going back to the autocratic bureaucracy.

The Extremists expect this issue, and to meet it are planning further disturbances, till they "frighten the British into submission" and into leaving the country to be an "independent Indian nation." If the Government of India are, as foreshadowed by Lord Reading, prepared to meet the disturbances, to come and put them down with a strong hand, the Extremists will not succeed, but there will be much trouble in the land till peace is restored. To Sir Tej, no doubt, such wild and visionary ideas are incredible, but these *are* the Extremists' intentions, plainly avowed.

With all that Sir Tej Bahadur Sapru says about the Government of India's appreciation of the situation and Lord Reading's clear insight with regard to it we must agree. Lord Reading has made it quite clear by his last speech that if the Council-wreckers succeed in paralysing the Administration, the Government is prepared to go on governing without the help of the representative Assemblies and Councils—which will go "into abeyance"—*as the self-government experiment will have failed*. With this certain prospect, it is up to Sir Tej Bahadur Sapru and his able and brilliant confrères to realize the facts and do all they can to retain what they have got rather than envisage ill-advised demands for premature "advance," long before they have marched successfully up to the limit laid down for them by the British Government and Parliament.

I am no reactionary or die-hard. What is done is done, and we have to make the best of it loyally, but enormous harm may be done by a misunderstanding of the facts of the situation, on which, as I have attempted to explain above, an attempt to rush matters is being made which may have disastrous consequences.

A LOOKER-ON WITH FIFTY YEARS' EXPERIENCE.

THE RESURRECTION OF TOKIO

By T. OKAMOTO

(First Secretary to the Japanese Embassy, London)

WILL Tokio and Yokohama rise like the Phoenix, with more modern and improved plumage than before, from the piles of ashes to which one-half of the former and practically the whole of the latter town have been reduced?

Let us look back to the past and try to form from it some judgment of the possibilities of the future, and, at the same time, formulate an answer to the question I have posed.

The last great earthquake shock which visited the present site of Tokio occurred on the night of November 10 of the second year of Ansei (1855), when the city was rapidly converted into a heap of rubbish, thirty-five fires having broken out simultaneously. For two weeks the earthquake shocks were almost continuous, and in Edo, the present Tokio, alone, 16,000 buildings were overthrown, and out of a total population of 600,000 no less than 104,000 lost their lives. This catastrophe occurred at a time when Japan was still strictly closed against foreign intercourse, and technical knowledge, in the nature of town planning, was much inferior to that of the present day. Left to exercise their own wits and resources, handicapped also by lack of engineering ability and by limited pecuniary resources, the authorities nevertheless succeeded within a comparatively short space of time in emerging successfully from the chaos wrought by the great cataclysm of 1855. In 1867, at the period of the restoration of the Imperial authority, practically all traces of the scars and injuries which the city had sustained from the terrible earthquake shocks twelve years previously had disappeared.

We are in a much more advantageous position nowadays than we were then, for not only have we been studying the question of town planning for some years past very attentively, but within the last forty or fifty years the wealth of the country has increased to a very large extent, and we are now able to avail ourselves of opportunities of foreign assistance in the shape of material or loans which, in those far-off days, were entirely out of reach.

Last, but not least, we have to-day a nation which is firmly united in its determination to set about the task of reconstructing the devastated capital and the important harbour town. Therefore, there can hardly be any doubt

that within a few years' time we shall witness the realization of the plan to build a new Metropolis and a new port of trade, not only more in keeping outwardly with modern ideas, but constructed with a proper regard to sanitary and traffic arrangements, always bearing in mind that these shall be achieved within the financial capabilities of the country.

The colossal nature of the task of reconstructing Tokio and Yokohama can best be realized by setting forth the damage to houses and other buildings, which was caused principally by the fire which broke out after the earthquake. In Tokio itself 301,336 houses, and in the suburbs some 600 buildings, were destroyed, and the aggregate value of dwellings and other buildings, both great and small, destroyed in the capital is estimated at 3,000,000,000 yen. The total area devastated was six times as great as that consumed in the Great Fire of London. Elsewhere than in Tokio the total number of buildings destroyed amounted to 226,218, and of these 68,398 were in the city of Yokohama.

In Tokio the Departments of Home Affairs, Finance, Education, Agriculture and Commerce, Communications and Railways, have been burnt down entirely, and the main buildings of the Foreign Office, which escaped the conflagration, have been so badly damaged by the earthquake shocks that they will have to be rebuilt. The list of embassies, Government buildings, banks, universities, colleges, schools, police stations, fire brigade stations, hospitals, newspaper offices, municipal offices, etc., is too lengthy to recapitulate here, but the mere mention of these institutions suffices to show how great the loss has been. Various estimates have been given of the stocks of merchandise and other property, including works of art, collections of rare books, and ancient relics, which have been lost, but it does not appear to be an exaggeration to set this figure at between ten and fifteen billion yen.

In view, therefore, of the importance and magnitude of the great task of reconstruction, it was natural that the Government should decide that the whole question should be subjected to the most careful consideration before embarking on a definite scheme. With this object in view, a body called the Council of Reconstruction was set up with practically plenary powers, and the final authority on reconstruction matters. It consists of Cabinet Ministers, leaders of the various political parties and of the business world, under the presidency of the Prime Minister. A second body, called the Reconstruction Board, has also been established under the presidency of the Minister for

Home Affairs, and this body is the chief executive body. Its task is to prepare the great plan of reconstruction, and having presented it to the Council of Reconstruction for their approval and obtained their sanction, to proceed to carry out the work, either as sanctioned or as amended by the Council. It will readily be seen, therefore, that the task of the Council is not a light one, and careful consideration was given to its composition so that it might unite within its membership such men as would ensure that its decision should be representative of the unity of the whole nation on this vital question.

The Reconstruction Board, in whose hands the initiative for the plans of reconstruction lies, took the view that it was incumbent upon them not to draw up schemes hastily, but to take full and sufficient time for consideration before arriving at a definite decision. The Reconstruction Board has decided that no permanent building of any character, whether governmental or private, shall be permitted to be erected in Tokio and other towns in the devastated area before a final decision on the reconstruction plans has been reached between the Board and the Council. An Imperial Ordinance was promulgated on September 16, 1923, in order to give effect to this decision, and it laid down that only temporary buildings might be erected, and then only for a period not exceeding two years. The work on these buildings, according to the Ordinance, is to be started not later than the end of August, 1924. The sagaciousness of this step is manifest, it being intended to prevent the authorities being hindered in their plans for laying out and carrying into effect reconstruction work, while at the same time the urgent needs for providing shelter and business premises were not being overlooked. It seems to me that no better chance has ever been provided for laying out an ideal new Tokio than the present, as the town has been reduced by the omnipotent hand of elemental forces to the status of the ancient wilderness of Musashi-no, and all the old traditions and complicated associations have been wiped out. Moreover, in view of the present distressful conditions prevalent among many of the sufferers from the disaster, it is quite easy to suppose what sort of permanent buildings they would be likely to erect if allowed a free hand at the present juncture to suit their own convenience.

At least four plans have been prepared at various times for remodelling the capital by the Home Department, the Municipality of Tokio, and other bodies, but all of them have been based on the conditions and circumstances which

existed prior to the recent catastrophe. As things now are, it appeared that none of these plans was suitable for adoption in its entirety, and that it would be wiser to disregard them in laying out a new town. Consequently the Reconstruction Board commenced work with an open mind, and the result was the drafting by the middle of November, 1923, of what we may term the first draft reconstruction plan. The expenditure involved by this scheme was estimated to amount in all to 750,000,000 yen, some of the details of the estimates being as follows :

1. TOKIO RECONSTRUCTION :					Yen.
Roads	...	...	...	...	406 million
Canals	...	...	...	...	28 "
Parks	...	...	...	...	12 "
Harbour works	...	...	...	...	32 "
Adjustment of land boundaries	...	...	...	...	9 "
Total	...	...	...	...	<u>487 million</u>
2. YOKOHAMA RECONSTRUCTION :					Yen.
Roads	...	...	...	...	42 million
Canals	...	...	...	...	5 "
Parks	...	...	...	...	2 "
Adjustment of land boundaries	...	...	...	...	3 "
Total	...	...	...	...	<u>52 million</u>
3. OTHER EXPENSES :					Yen.
Canal connecting Tokio and Yokohama	...	...	...	...	14 million
Preliminary investigations	...	...	...	...	1 "
Various subsidies	...	...	...	...	100 "
Total	...	...	...	...	<u>115 million</u>

At a Cabinet meeting on November 22, 1923, this plan was submitted and adopted with some alterations, which reduced the total estimate to 702,900,000 yen, and the plan as amended was subsequently submitted to the Reconstruction Council, which further and more drastically reduced the estimate to 597,000,000 yen by separating from the present reconstruction plan the Tokio Harbour scheme and the scheme for building a connecting canal between Tokio and Yokohama, as well as by reducing the width of the proposed main roads in Tokio.

At the time of writing full details are not yet available, but in all probability approximately the last figure quoted above has been embodied in the Government's Budget for reconstruction, introduced in the Extraordinary Session of the Japanese Diet specially convened for the urgent business of reconstruction for ten days from December 10, 1923. Some details of the estimates are as follows :

				Yen.
1. GENERAL EXPENDITURE	...	...	...	23 million
2. TOKIO RECONSTRUCTION :	Yen.			
(a) Roads	...	...	...	320 million
(b) Adjustment of boundaries	...	...	...	40 "
(c) Canals	...	...	...	28 "
(d) Parks	...	...	...	18 "
(e) Other items	...	...	...	43 "
				449 "
3. YOKOHAMA RECONSTRUCTION :	Yen.			
(a) Roads and adjustment of land boundaries	...	...	...	38 million
(b) Canals	...	...	...	6 "
(c) Parks	...	...	...	2 "
				46 "
4. ADVANCES FOR RECONSTRUCTION ENTERPRISES	...	...	...	15 "
5. SUBSIDIES FOR CREATING ZONES OF SAFETY AGAINST FIRE	...	...	...	20 "
6. SUBSIDIES FOR LOCAL RECONSTRUCTION ENTER- PRISES	...	...	...	69 "
7. SUBSIDIES FOR COVERING INTEREST FOR LOANS ON ACCOUNT BY LOCAL RECONSTRUCTION ENTER- PRISES	...	...	...	22 "

It will be remarked that a very large proportion of the proposed expenditure is for the purposes of laying out new roads and parks, and it is of interest to note the reason for this. Owing to the rapid increase of population, practically every scrap of available space in the capital had been utilized for building dwellings and business premises, in entire oblivion, such is the weakness of human memory, that open spaces or fireproof zones, as they may be called, are an essential safeguard in a great city subject to earthquake visitations.

Although formerly great regard had always been paid to the preservation of such fireproof zones, gradually they had been encroached upon and less and less space had been reserved for these purposes in the Metropolis in spite of the obvious lessons of the past. For instance, at the time of the great Ansei seismic disturbance alluded to above, thanks to these free spaces, and in spite of the fact that thirty-five conflagrations were in progress at the same time, the greater part of Edo (the present Tokio) was saved from being burned down. It would appear that the bitter lesson of the recent catastrophe has not been lost upon the authorities, and that they intend to attach the greatest importance to the widening of roads and to the creation of emergency squares. Doubtless the objects of facilitating traffic and promoting and improving the public health by the creation of open spaces are also foremost considerations,

but there is no doubt that there are other reasons. The idea seems to be that by laying out wide roads and by creating parks and squares the Metropolis will be physically cut up into so many sections, and thus there will be a greater possibility of preventing the spread of a conflagration from one section to another section.

It will be recalled that one of the most terrible features of the recent catastrophe was the truly awful disaster at Honjo, whereby more than 33,000 men, women, and children were roasted alive. In Honjo, which is at the rear of Yokoami, to the south of Tokio, there are about 20 acres of land which were formerly occupied by the Army Clothing Depot, but the building having been removed, it was, at the time of the disaster, a large, vacant space. To this place of refuge men, women, and children, conveying all the household effects on which they could lay their hands, flocked in their thousands from the conflagrations which were sweeping over Nihon Bashi. In spite of the barrier imposed by the River Sumida, which has a width of some 240 yards, the fires in the Asakusa ward swept across the river, and, uniting with the fourteen separate fires already burning in the Honjo district, encircled the whole of the refuge place and entrapped all whom it contained. By sundown all, save a few hundred who escaped as by a miracle, perished, roasted alive by the fiery rain of cinders which descended upon their heads from the surrounding buildings.

There is one astonishing fact to note in connection with this holocaust. No casualties occurred at the Iwazaki Villa, which is in its neighbourhood, but is surrounded by many trees and plants, and afforded an asylum to some 60,000 people who were unable to gain access to the Honjo ground. The Asakusa Temple, again, which was also in the midst of an area entirely devastated by fire, escaped the scourge on account of some tall trees—particularly maidenhair trees*—on the side whence the wind was carrying burning cinders. These facts are an eloquent witness to the value of trees as a fire-guard, and prove that vacant open spaces are insufficient in themselves to check a conflagration unless lines of trees and plants are also provided. Hence the authorities appear to be fully justified in providing such large sums to secure that the new Tokio will have not only broad roads and many safety zones, but also a sufficiency of tree and plant protection.

The general idea is that the reconstruction work will be

* The *Gingko biloba* or *Salisburia adiantifolia*, a Japanese tree which has luxuriant foliage and attains a large girth.

spread over a period of six years from 1923, the Reconstruction Bureau undertaking the planning and carrying out of the main framework, details being left to the Tokio Municipality. The scheme may be roughly subdivided as follows:

A. THE CENTRAL CITY AREA.—The district comprising Marunouchi, and formerly consisting of Kanda, Nihonbashi, and Kyobashi districts, will become the central city area, containing the Government Departments and main commercial and business houses, the Tokio Railway Station forming the centre of the district.

B. MAIN ROADS.—(1) A road, 120 yards in width, will start from the square in front of the Tokio Railway Station and end at the new Parliament Buildings, via Sakurada-Mon. This road will also serve as a boulevard.

(2) A road, 84 yards in width, from the east entrance of the Tokio Station to Susaki, via Makicho and the Eitai Bashi.

In addition to these two main roads, the following are proposed:

(3) A road, 72 yards in width, connecting Shinagawa and Shenzu, passing through the heart of Shiba, Kyobashi, Nihonbashi, and Shitaya districts.

(4) A road, 60 yards in width, connecting Ikebukuro and Kinshibori, via Kudan, and piercing through the Kanda district, Asakusa-Bashi, and Ryogoku-Bashi.

Other main roads are projected which will shoot out towards the suburbs from the central city area like sun rays, or, on the other hand, will encircle it in a series of concentric circles.

The main sun-ray roads will be:

(a) The road from Hibaya to Meguro through the Shiba district.

(b) The road from Miyakezaka to Shibuya.

(c) The road from Hanzoh-Mon to Shinjuku.

(d) The road from Sudacho and Sugamo.

(e) The road from Sudacho to Ueno and Nippori.

The width of all these roads will vary from 45 yards at the widest point, and will be graduated in accordance with traffic considerations.

C. It is projected to have tram lines in the majority of these roads, with a foot pavement on both sides, lines of trees and telegraph and telephone posts being situated between the carriage roads and the pavements. Cross roads will be modelled, as far as possible, in the shape of a circus in order to facilitate traffic, as the former square shape is considered to have been inconvenient.

D. The Reconstruction Bureau has under consideration the building of a high-speed underground railway, the

minimum portion of the plan involving one running from Shiodome to Senju, along the line of the road specified above under (3). It is further projected to construct some elevated lines to be built in collaboration with the Ministry of Railways.

E. It is proposed to build two central markets, one for fish and game, on the site of the former Naval Works at Tsukiji, which is conveniently situated for transport both by land and sea. The proposal to move from the former site of the fish market, which was situated in the heart of the business quarter, had been made before the earthquake, but had not been well received by those interested in the fish trade, although the Municipal Authorities were keenly conscious of the desirability for sanitary and other reasons of the proposed move. Now, however, the earthquake and the fire combined have solved the problem.

With regard to the new vegetable market, it is proposed to erect this near the site of the former one in the vicinity of the Kanda Railway Station.

In addition to these two central markets, it is also proposed to erect subsidiary markets for the supply of daily necessities in every district of the new capital if financial circumstances admit.

F. PARKS.—At present there are twenty-four parks, large and small, in Tokio and its suburbs, and, according to the new scheme, this number will be more than doubled, with an aggregate area of some 500 acres. Generally speaking, no resort will be had to the policy of buying up private property for the purpose of laying out these parks, and the authorities will utilize as far as possible public land belonging to the State or to the Municipality.

The most notable parks which it is proposed to lay out will be on the site of the former military arsenal of Koishikawa and of the Honjo Military Clothing Depot. In addition to the parks, it is also proposed to lay out many public squares and open spaces.

It is a great work to which the Japanese Government, backed by the Japanese nation, have set their hand. In my opinion the chances of ultimately realizing the creation of a new capital, which shall be reasonably safe from damage by earthquake and fire, are good, and this opinion is shared by the vast majority of my countrymen. Time, patience, perseverance, and above all a rigid economy in expenditure and a determination to utilize to the best advantage the national resources of the country, are the main factors which enter into the solution of probably one of the greatest problems with which a nation has ever been faced.

SCIENCE AND MEDICINE SECTION

A CAMPAIGN AGAINST LEPROSY

BY SIR EDWARD A. GAIT, K.C.S.I., C.I.E.

No one who has visited any big place of pilgrimage in India, such as the temple of Jagannath at Puri, can ever obliterate from his memory the painful spectacle of the numerous maimed lepers who line the pilgrims' route, some begging for alms and others lying inert, a picture of hopeless misery.

Leprosy is now known to be caused by a specific bacillus, and there is no longer any doubt that it is communicable from one person to another. The risk of infection is, fortunately, less than in the case of most other bacterial diseases, but those who live in the same house with a leper, especially young children, who are very susceptible, are likely, sooner or later, to contract the disease. Until recently no cure was known, and anyone becoming a leper was condemned to a life of mental and physical suffering, until, usually after many years, death brought the only possible relief. The leper is a prey to constant pain and insomnia, his features become distorted, taking on a leonine appearance, and festering ulcers corrode away his fingers and toes, leaving only shapeless stumps. So disgusting is his condition that his nearest relations often refuse to have anything to do with him, and he is driven from his home to seek a precarious livelihood by begging.

Over 100,000 persons were returned at the last census of India as lepers, but as all who can do so conceal their condition, while in its earlier stages the true nature of the disease is often not recognized, the actual number of lepers is far greater, and may possibly be double the above figure.

In recent times efforts have been made to alleviate the hard lot of these sorely afflicted persons. The Mission to

Lepers in India and the East has been specially prominent in this philanthropic work, and in India alone maintains some fifty asylums, in which between five and six thousand sufferers are provided with a comfortable home, sufficient food, and medical attendance, and are treated with the utmost sympathy and consideration. The writer has visited several of the asylums maintained by this Mission, and can testify from personal observation to the excellence of the management, and to the anxious care which is taken to make the unfortunate inmates as comfortable as possible. The fact that the asylums are always filled to the utmost limit of their capacity, and that wherever additional accommodation is provided it is immediately occupied, shows how highly these homes are appreciated by the lepers themselves.

Nearly four thousand lepers are accommodated in asylums maintained by other agencies, so that in all provision is made for about nine thousand lepers. These institutions undoubtedly serve a most useful purpose in mitigating the distress of a considerable number of lepers, but they have not very much effect in reducing the prevalence of the disease. They contain only a small proportion of the total leper population, and their inmates are chiefly persons in whom the disease has reached an advanced stage, when the danger of infecting others is comparatively slight. Moreover, as these asylums are mainly on a voluntary basis, complete segregation is not always practicable.

In the Middle Ages leprosy was very widely diffused in Europe, and was such a scourge that in England, France, and several other countries, nearly every town had its leper house in which persons contracting the disease were compelled to reside. Owing mainly (it may be presumed) to this rigid segregation, leprosy disappeared long ago from the greater part of Europe, though it still lingers in certain tracts in the North, East, and South. The question will, no doubt, be asked why, if segregation led to the eradication of the disease from most European countries, the

same measure has not been resorted to in India. The answer is that India is a poor country and cannot afford the large expenditure which would be required for the provision of asylums on a scale sufficient for the segregation of the entire leper population. Fairly liberal contributions have, however, been made by the various provincial Governments towards the cost of maintaining the private asylums already referred to. Power has been taken by law for the compulsory segregation of pauper lepers, but very little use has yet been made of it, as owing to the financial stringency which has prevailed since the Act in question was passed, it has not yet been found possible to proceed with the construction of the settlements needed for their confinement. In several provinces, however, the necessary arrangements are in progress. They are most advanced in Madras, where, thanks to the great interest taken by their Excellencies Lord and Lady Willingdon, a large leper colony is approaching completion. This will eventually contain accommodation for about a thousand pauper lepers, and a farm of 400 acres is attached to it, on which those who are still capable of work will find congenial employment.

In order to afford some protection to the general public, lepers have been forbidden by law to engage in certain specially dangerous occupations, such as those of baker and milkman.

Incomplete as are the measures which have hitherto been taken to combat this disease, the returns of successive Indian censuses show a steady diminution in its prevalence. This is due in part to the fact that in the earlier censuses persons suffering from other diseases were erroneously recorded as lepers; and in any case it is certain that if nothing more could be done in the future than has been done in the past, many generations must elapse before India becomes free from this dreadful disease.

Happily a new factor has now come into play. Thanks to the researches of Sir Leonard Rogers and other workers

in various parts of the world, it has been found that an old Indian remedy (*Chaulmoogra* oil) can be prepared in a soluble form for injection into the veins and muscles. This removes the insuperable difficulty which had previously been experienced in administering it orally in effective doses. It has also been found that soluble preparations from certain other oils have marked beneficial results. The new remedies have been tried in a great number of cases in India and elsewhere, and have been found to result in the gradual destruction of the leprosy bacilli and the disappearance of all outward signs of the disease. Thus Dr. Muir, the leprosy research worker at the School of Tropical Medicine in Calcutta, writes—

“We believe that in all early cases an arrest and retrocession of the disease up to a relative cure may be expected if diet, exercise, and general sanitary conditions are favourable, and if the patient does not suffer from any intercurrent or concurrent disease which may lower his resistance or otherwise prevent improvement, and if he continues treatment for a sufficiently long period of time. The deeper, the more widespread, and the more longstanding the lesions, the less the hope of recovery; but given a healthy body, youth, and other favourable circumstances, we think that there is every hope of a relative cure in the majority of cases, even where the disease has become widespread.”

Leprosy, like tuberculosis, has a very long period of incubation, and scientific men naturally hesitate at this early stage to say whether the cures which have apparently been effected will prove permanent. But there can be no doubt whatever that a remarkable advance has been made; and in one of the largest asylums in India the mortality has already been reduced to one-fifth of the former rate.

It is safe to assert that even if relapses may sometimes occur, the disease can now generally be brought under control and the risk of contagion very materially reduced.

A very valuable result of the success of this new treatment is that where it becomes known many persons in the early (and more infective) stages of the disease, who formerly attempted to conceal it, are seeking admission to

the asylums where the treatment is given. The treatment can be administered by any medical man who has undergone a short course of training; and as it consists simply in the injection of one or other of the new remedies at suitable intervals, there is no reason whatever why, if proper arrangements are made, lepers should not be treated at their homes or at the numerous dispensaries which exist in all parts of India. There is thus good reason to believe that if a sustained effort is made on an adequate scale, leprosy can now be eradicated within a comparatively short period. This being the case, it is clearly our duty to make this effort. The British Empire Leprosy Relief Association has accordingly been formed with the object of raising the necessary funds and directing a systematic fight against this dreadful disease in all parts of the British Empire.

The conditions in India have been specially referred to in this article as that is the country with which the writer is personally acquainted. But leprosy is even more prevalent in the tropical African colonies, and it is to be found in a varying degree in many other parts of the Empire, such as Ceylon, the Malay States, Malta, and Cyprus.

In all there are probably at least one-third of a million lepers in the Dominions of the King. The British Empire Leprosy Relief Association has thus a huge task before it. It has, however, obtained very valuable support. The Prince of Wales has consented to be its Patron, and the Secretaries of State for Foreign Affairs, India and the Colonies, and the Governors-General of Canada, New Zealand, South Africa, and India have agreed to become Vice-Presidents. Viscount Chelmsford, late Viceroy of India, is Chairman of the General Committee, which is an exceptionally strong and representative body. Sir Leonard Rogers, who possesses unique qualifications for the post, is Chairman of the Medical Committee. The work which the Association intends to undertake may best be described in the words of the Appeal which is being issued :

1. To help all lepers in the Empire by providing the latest treatment for all, and houses for those who are homeless and destitute.

2. To supply the latest medical information and the most improved drugs to leper institutions, settlements, and hospital clinics; and to train those in charge of lepers in applying the treatment efficiently.

3. To support sound schemes of segregation, with the best treatment, in countries where large numbers of lepers ought thus to be dealt with.

4. To collect information and statistics and to issue bulletins of information and advice to all working amongst lepers.

5. To support further researches on both the etiology and treatment of leprosy, with a view to discovering more efficient methods of prevention, and to further simplify, shorten, and cheapen the curative measures.

In order that the campaign against leprosy may be really effective, the Association needs at least £250,000. This is no doubt a large sum, but it will be admitted that it is by no means excessive when it is remembered that it comes to less than a pound for each leper. And surely the people of Great Britain, who have so generously given £250,000 as their part of a world-wide collection for the sufferers from the recent earthquake in Japan, will not fail to give an equal sum to relieve the distress of their own fellow-subjects who are the victims of a far more terrible visitation.

The Association's appeal will be launched formally at a meeting in the Mansion House on January 31, at 3 p.m. The Lord Mayor will preside, and the speakers will include the Duke of Devonshire, Viscount Chelmsford, Sir Humphrey Rolleston, and Sir Leonard Rogers. It is earnestly hoped that the response will be worthy of the great traditions of the City of London, which has such a splendid record of practical philanthropy, and will render it possible to commence at once an effective campaign against leprosy in all parts of the British Empire.

THE CASE FOR SINGAPORE

BY M. S. WOODHOUSE

To the average man Singapore is a mere name, and to hear it quoted produces much the same mental atmosphere as is produced by naming Timbuctoo. Both appear to be equally nebulous, equally distant and mysterious.

Yet Singapore is not only one of the most cosmopolitan towns in the world, but from its geographical position it possesses great strategic and commercial value. The town is situated on the southern shore of an island of the same name, off the southern extremity of the Malay Peninsula, and is, in fact, the gateway between India and China. It has become the great entrepôt of Southern Asia and the Indian Archipelago, to which the inhabitants of all parts of the Indian Ocean resort with the produce of their farming and manufacturing industry, and where they, in their turn, find abundant supplies of every variety of European goods. Not without reason has Singapore been termed "the Liverpool of the East." As a commercial centre it is without a rival in this part of Asia, and much of its increased prosperity in trade is due to the rapid development of the Federated Malay States on the mainland. Singapore possesses a good harbour; docks and extensive coaling wharves, which have been acquired by Government from the Tanjong Pagar Dock Company; large graving and other docks, including an Admiralty dock; and many facilities for shipping. On the island of Pulau Brani near by are the largest tin-smelting works in existence. The town also possesses a big factory for tinning pineapples and a large biscuit factory. The Island of Singapore is twenty-seven miles long and fourteen miles wide, and is separated from the mainland by a narrow channel varying in width from half a mile to two miles across. It was occupied in 1819 by Sir Stamford Raffles, who obtained permission to build a factory there on behalf of the East India Company. In 1824, the sovereignty and fee-simple of the island was obtained by

treaty, as well as that of all the seas, straits, and islands to the extent of ten geographical miles (eleven and a half miles) round. Tradition says that the island was a trading centre as far back as the twelfth century. About another century later it was invaded, and Singapore (Lion Town) was taken by the Javanese, who drove the Malays north to Malacca, where they founded a new kingdom. Apparently the country was subsequently abandoned, for when Sir Stamford Raffles persuaded the Sultan and Tumengong of Johor to cede it to him, a few fisher folk only dwelt along its shores, and the whole island had but 150 inhabitants. At the beginning of the present century the census returns showed this number had increased to 3,824 Europeans, 4,120 Eurasians, 164,041 Chinese, 36,080 Malays, 17,823 Indians, and 2,667 other nationalities. Though only seventy-six miles from the equator the island is remarkable for its salubrity. It has the advantage of frequent refreshing showers; its foliage is therefore always luxuriant. Most of the jungle has now been cleared away, and fruit and vegetables are grown in abundance and to great perfection. More than half the rubber of the world is produced here, and approximately 40 per cent. of the tin. The trade of the hinterland at the present time amounts to about £50,000,000 sterling. Much of the retail trade is in the hands of Chinese, Indian, and Arab traders. The port is free except for opium, wines, and spirits.

* * * * *

The Naval Estimates presented in the House in March last, and carried by 214 votes to 133 votes on July 19, included the estimated cost of creating a new naval base at Singapore—one that would be capable of dealing with the requirements of a fleet of modern capital ships. For this purpose a Vote of £10,500,000 was asked, the proposal being to spend approximately £200,000 during the current year on the clearing of sites, etc., rather more next year to provide for the provision of houses for the workers and staff, etc., and the remainder, about £9,000,000, to be spread over a succeeding

series of years. The whole question has met with much opposition, not only from Liberal and Labour benches in the House, but also from a certain section of the public.

Speaking generally, the criticisms may be classed in three groups : Financial, Strategic, and Political. With regard to the first of these groups, the arguments are particularly weak. Even the most rabid economy enthusiast cannot reasonably claim that the cost is in any way prohibitive, more particularly as there is the proviso that payment shall be spread over a ten-years' period. Considered as a matter of insurance only, it is a cheap investment against what might easily be disaster and ruin, and probably the loss of half our Empire. A doubt has recently been expressed, despite the assurance of the Admiralty to the contrary, as to the sufficiency of the sum quoted to meet the ultimate liability, the criticism being based on the experience of the Singapore Harbour Board at Tanjong Pagar. In reply to this, the First Lord has pointed out that the site of the new works is in a granitic geological formation, and is very different from that at Tanjong Pagar. A sufficient number of borings has been already taken on the site to prove that granite exists at a suitable depth for the dock and wharf walls. With this information there is every reason to be satisfied that the basis on which the estimate has been framed is such as to justify the belief that it is sufficient for the proposed works. A further argument has been submitted suggesting that the money spent would be wasted, because battleships would be so changed and developed in ten years' time as to render the base valueless ; but it was pointed out that under the Washington Agreement there are to be no new ships of a different design built during the next ten years.

A later communication from the Colonial Office announces that the Government of the Straits Settlements has decided to purchase and to present to His Majesty's Government as a free gift the lands required as sites for the naval base and aerodrome. These lands comprise 2,250 acres of land with foreshore at North Sembawang for the naval base, and 595 acres of land with foreshore at East Seletar for the aerodrome.

Their estimated value is £200,000, but they are in private ownership, and it is possible that the cost of acquisition may exceed that figure.

The second group of criticism, largely dominated by Admiral Sir Percy Scott, claims that the submarine and aircraft have rendered the battleship obsolete, and quote the action of the Grand Fleet during the recent war as proving this. Now, it cannot be asserted too emphatically that the battleship is still the supreme unit of naval power. It embodies in one unit the maximum of offensive and defensive qualities. What the Marquis of Linlithgow recently termed the "specialized" ship may certainly prove more effective in any one particular direction. Thus, compared with the capital ship, the destroyer has speed, but little resistance for bullets; the cruiser has both speed and mobility, but is too vulnerable, her guns are lighter and her crew smaller. During the recent war, despite the fact that the German submarine was extremely effective with regard to its attack on unarmed craft, it is well to remember that no single battleship engaged on either side was sunk by a torpedo fired by a submarine. At the close of the war, the submarine menace had been completely held and checked. Since then, submarine defence has been increased and developed far in advance of any development in the effectiveness of the submarine. It is no argument to say that our battleships were always protected by an escort of destroyers. That was a necessary, and certainly effective, measure of protection. Just so, in the Army, is an Infantry Division protected by an advance guard. If one argues that battleships are obsolete because of air and submarine craft, then all floating craft are under the same ban. This is impossible of acceptance. Far from the Grand Fleet being inactive during the war, we are told that on the Chart now being prepared to show the movements of the Grand Fleet and important capital ships during those years, the North Sea is almost made invisible by their tracks. Speaking in the Guildhall, London, on November 9, Earl Beatty declared the capital ships to be the basis of sea-power; it was the unit upon

the support of which depended the freedom of action of every less powerful type of craft; it was a match for any ship or weapon that could be brought against it.

A certain Liberal member of the House even goes so far as to attack the policy of the Admiralty on its action regarding the redistribution of the Fleet. Fortunately, the country generally has full confidence in the considered judgment of its naval experts, despite what pseudo-experts can and do say to the contrary. As a matter of fact, nothing is being done that involves a departure from the general naval policy of the Empire in the past. Before the great Fisher concentration in the North Sea in 1906—a concentration, owing to the German menace, that was both necessary and inevitable—we had squadrons in almost every part of the world. Our Fleet on the China station was always one of the main fleets of the Empire, and included its quota of capital ships. For the past fifty years the naval strategic centre has varied between the Mediterranean and home waters. Dockyards to meet strategic requirements were created and expanded at Malta, Gibraltar, and the home ports. From 1904 onwards the strategic centre moved more and more to the North Sea, and we have as a result the creation of Rosyth Dockyard and a secondary base at Invergordon. With the disappearance of the German menace, we find the strategic centre again moving. Strong naval forces are already gathered in the Pacific. Would this critic defend the Pacific with a fleet based on Rosyth? Inevitable as was the concentration in the North Sea during the war, the effect was a heavy debit of blood and treasure. The *Emden* destroyed 68,581 gross tons, and the *Moëwe* 154,637 gross tons, of world shipping. This could not have happened could we have had a squadron in the Pacific as heretofore. Again, in 1911, arrangements were made with the Dominions for the joint maintenance of a Pacific Fleet, consisting of three capital ships to be kept in that area, and it was only the extreme pressure of the German development from 1912 onwards that compelled us to keep the ships in question, the *Indomitable* and *New Zealand*, in home waters. Had it been

possible for these ships to have been in the Pacific, the battle at the Falklands might have been fought elsewhere and earlier, and the squadron under Admiral Cradock would not have suffered as it did.

To enter into any detail as to the part aircraft will play in future warfare is to travel beyond the scope of the present article. All that need be done here is to emphasize one or two points. It is difficult to imagine how anyone can believe that a service yet in its purely experimental state can hope to replace our modern capital ship. No one denies the need, the urgency of developing our Air Service, but as far as the Navy is concerned, it must be as an addition to, and not instead of, for many years to come. For purposes of reconnaissance, locating guns, and other scout work, aircraft are invaluable. In the House of Lords on July 11, a further effort was made to establish the principle that aircraft are able, or will be able in the near future, to do what battleships can do to-day or did yesterday. These critics lose sight of the fact that the main function of the Navy is not to guard our shores, but to keep open the great sea routes for the safe passage of our trade and for the defence of our scattered Empire. Sea-power, too, not only carries with it power to carry men, munitions, and cargo across the seas, but it also enables the country that enjoys it to deny an enemy all these advantages. England might be made immune from bombs by air, but, as the Marquis of Linlithgow pointed out in the House of Lords recently, what enemy would trouble to kill a few hundreds when starvation would kill all?

The United States Government has recently reported on experiments carried out by them on the *Ost Friesland* and the *Iowa* with armed aircraft. The Report, which is signed by General Pershing, clearly indicates that the results obtained under ideal conditions—i.e., stationary or practically stationary targets, immunity from enemy interference, and excellent visibility and flying conditions—will be reduced to a negligible quantity in the case of war conditions, that is, with a target moving at high speed on various courses, and pro-

tected by anti-aircraft armament and effective pursuit planes. It is evident, therefore, that responsible naval opinion, both in this country and in the United States, has come to the conclusion that air-power is not a substitute for, but an extension of, sea-power.

Granting, then, that for many years to come the battleship is the dominant factor in naval defence, is another naval base either necessary or justifiable? The reply is unhesitatingly in the affirmative. In 1911, capital ships moved easily from and were docked comfortably in Eastern waters. But many of the Rip Van Winkles in our midst apparently do not realize the changes that 1923 has brought. The modern capital ship carries oil instead of coal, and this necessitates the laying down of a series of oil-fuel stations, without which the Fleet would be stationary. Neither are the present docks wide enough for the new type of capital ship, which has to be bulged for defence against mines and submarines, and is thus made too wide to enter existing docks. Hence both graving and floating docks are required. These changes would have been necessary had there been no Washington Conference, of which more anon. Our Navy must be prepared to operate, not only in the seas near home, but on the other side of the world if necessary. The interests of our Dominions and of India are sometimes overlooked. The centre of storm-gravity in the future will be the Pacific rather than Europe. Under the conditions of modern warfare, no fleet could cross the Pacific during active hostilities. The only possible way we could get to the theatre of war in the Far East would be by going from the Atlantic through the Mediterranean, and along our chain of bases. It is a fact that the shipping of the Pacific is overtaking the shipping of the Atlantic. More than half the population of the world borders on the Pacific, and looks to the Pacific for its outlet to the sea. At this moment the shipbuilding of the United States on the Pacific coast is nearly double the shipbuilding of that country on the Atlantic coast. In other words, the Pacific is becoming increasingly important to the future of the world. Further, twenty years ago Japan was

a small naval Power. To-day that Power has increased enormously. We do not anticipate war with Japan, or any other Power, but it is the duty of the Navy to be prepared for all possible remote contingencies. Helpless, we provoke attack. After all, Japan has a much larger population than we have, and it is increasing much more rapidly than our own. Her trade, too, has increased in ten years from £92,000,000 to £438,000,000. When our thoughts go to Germany we cannot fail to see a certain coincidence, and we must realize the danger of deferred action. The defence of the Dominions in the East has long been recognized as inadequate. Without a suitable dock at Singapore, even for a small job such as repairing a damaged propeller, a ship must now go to Malta. For this, a two or three days' job at Singapore resolves itself into an absence of the ship for six or eight weeks, not allowing time for fuelling. At present, there is no dock outside England available for a bulged ship.

The geographical position of Singapore makes it one of the national strategical centres of the world. Not only does it lie on the flank of some of our most vital food lines of communication, but it is within easy supporting distance of India, and the Dominions of Australia and New Zealand. Economically, and from the point of view of accommodation, it lends itself to conversion into a Fleet base. A present member of the House of Commons, who, by the way, has lived in Singapore for twenty years, says of it: "No better place could be found to establish a base. The surrounding islands lend themselves admirably to artillery defence. The waters are such that they could be mined and would be useful for submarine work in the event of war. The harbour itself is a most wonderful place for the anchorage of ships of the biggest size, and the graving docks can take in practically the largest ships in the world at the present day. There is a breakwater there, to which small craft can always go in time of storm and stress."

The Admiralty does not propose to interfere with the beauty or with the depth of the existing harbour. At the

particular point where the new base is to be constructed, it is hoped to accommodate a very considerable number of ships without any dredging, and to construct the necessary docks and basins without undue difficulty or expense.

Singapore has been defended since 1882, and all that is now suggested is to bring it up to date. The work of improving the existing docks was delayed by the outbreak of the Great War; but the scheme was approved by the Imperial Conference in 1921; it was strongly recommended by the Committee of Imperial Defence; it was approved by the later Cabinet, and has been approved by the present one. At the Guildhall banquet held this month, Earl Beatty declared that we could not afford to rely for existence upon the goodwill of others, but that if our interests were to be properly safeguarded, then Singapore must be brought up to date.

At the Imperial Conference held in London this autumn the whole scheme was given very full discussion, and received the strong approval of the Dominions immediately affected—India, Australia, and New Zealand giving their full support.

It will be remembered that the New Zealand estimates, published in August last, included £100,000 contribution to the new naval base.

The third school of criticism is political, and has a moral bearing. It insists that to develop Singapore is provocative towards Japan, is contrary to the spirit of the Washington Treaty, and constitutes a flouting of the League of Nations. Mr. Amery has emphatically denied this. "The agreement at Washington," he has said, "was for a limitation in the number of capital ships, and the maintenance of the *status quo* as regarding bases within a very carefully defined area. There was no limitation on any of the Powers concerned as to the building of any type of ship either in their dockyards in the Pacific or other waters, and none of the Powers made communications to each other in respect of those things."

It was clearly understood at Washington that Singapore was not included in the agreements arrived at. Those agree-

ments pledged all "not to establish or to further develop naval bases within that region where the construction of those naval bases would obviously indicate the possibility of aggression against Japan. Hence the United States cannot develop any base west of Pearl Harbour, and we may not develop any further our small out-of-date base at Hong Kong." Singapore is three thousand miles away from Japan. If we had had any idea of aggressive domination there, we should scarcely have consented to a scheme that deprived us of the effective use of Hong Kong. From Singapore to Yokohama is about the same distance as from Gibraltar to Boston. Is it suggested that the construction of a new dock at Gibraltar would be a menace to the United States any more than Malta and Gibraltar can be considered as a menace against France or Germany? But we must insure against even remote contingencies. For many years to come there is nothing to prevent the Japanese from taking Hong Kong and Singapore, and from there operating against either Australia or India. As was said before, to be helpless is to invite attack. The only way to meet such a situation is to secure that the main Fleet shall have real mobility and be able to get within a reasonable time to any threatened area, and to be able to operate within that area. The Navy must have the same mobility in the oil fuel days, and the days of the big bulged ships, which it enjoyed in the days of coal.

If we are to rely entirely on "peace and goodwill," as certain members in the House apparently would have us—well, why cast a gun, build a ship, or enlist a soldier? The whole argument is futile. The League of Nations has laid down as one of its chief objects, "to prevent war by co-operation against wanton aggression." How can this be done without some force with which to co-operate? It is this very strength of the British Empire that is so powerful a factor in the policy of the League. In so far as the League of Nations has succeeded, it has succeeded owing entirely to the support of our own Government and the Governments of the British Empire. Mr. Asquith himself has pointed out to

the House that he did not believe the creating of the Singapore base to be a breach of the Washington Treaty, "because," he said, "the Treaty defines geographically the limits within which the self-denying ordinance as to the establishment of new naval bases was to be carried out." That agreement, however, did not prevent any other Powers from developing those bases which were required for the mobility of their fleets on the outer border. Japan is not precluded from building bases on its own mainland, and is, in fact, spending two million pounds this year on its naval bases in Japan. Australia explicitly is free to strengthen her bases. In the discussion which took place it was clearly understood that Singapore stood outside the region indicated, and was clearly outside the Treaty.

We believe the case for Singapore to be an overwhelmingly strong one. Public opinion in the Dominions and in the Colonies is in favour of the scheme. There is no apparent reason why decision should be delayed, since, after all, both cost and responsibility of Imperial Defence rests, at present, on our shoulders.

The whole Empire is deeply indebted to the First Lord for the strong attitude he has taken on this question. His ability and courage for the task none doubted. His firm courtesy and his statesmanlike policy have earned the respect of his opponents, and deepened the faith his friends have always placed in him.

THE NEW EAST

[This is the second in the series of articles on the changed conditions in Asia since the war. The first, entitled, "Turkestan Since the Revolution," appeared in the last issue.]

UNHAPPY BOKHARA

WHEN in 1870 the Russians in the course of their steady advance in Central Asia subjugated Bokhara, they left that Khanate as an independent State. They extended to it their protection and posted a Resident in the capital to advise the Amir on matters of administration; the railways and telegraphs, as they were built, were kept in Russian hands, and Russian garrisons were located at strategic points along the railway line and on the Afghan border; but as regards the internal affairs of his State the Amir of Bokhara was left a free hand. He kept up his own little army, selected his own officials, made his own laws, and collected his own revenue. The advice tendered to him by the Russian Resident he was in no way bound to accept, although in actual practice he invariably did so, knowing full well the strength of Russia and how entirely the independence he enjoyed depended on his own behaviour towards her. Russia, on the other hand, from the fact that she controlled the main communications across the Khanate, enjoyed to the full the use of its strategic position *vis-à-vis* Afghanistan, and profited from its resources, may be said to have made such use of Bokhara as suited her own advantage, while avoiding any of the trouble and expense of administering the country.

Bokhara-el-Sharif, though fallen into insignificance as compared with its former greatness, still maintained a high reputation throughout Central Asia as a centre of learning and religion. The Amir claimed the title of "Commander of the Faithful," and was ranked almost on the same plane as the Caliph by people far beyond the bounds of his own territories. Perhaps, indeed, it was partly owing to the reverence in which he was held among the Muslims of Central Asia that the Tsars refrained from reducing him to complete vassalage for

fear of the effect which such a step might have on their many Muslim subjects. Be that as it may, the Amirs of Bokhara had continued until the time of the Great War as independent rulers and exercised their powers in the most autocratic fashion. Their justice was summary ; bribery and corruption were rampant in their territories, and their officials were a byword even in Oriental countries for their exactions from those over whom they held control. On the whole, however, the Bokharans appreciated their independence and cheerfully endured the hardships which were their lot. They had been brought up to such conditions, and in most cases had had no experience of any other régime. There were some, however, mainly individuals who had travelled in Russia proper or in other countries and who had seen the benefits of modern civilization, who grumbled. Some were even rash enough to raise up their voices and urge reforms, but such persons were vigorously suppressed by the authorities, and, it may be added, carried little weight with the bulk of the population.

Such was the state of affairs on the outbreak of the Great War, the echoes of which were only faintly heard in far Bokhara. The Russian garrisons were relieved by reservists ; these in their turn were despatched to the front ; considerable numbers of German and Austrian prisoners of war were brought into the Khanate and set to work on building new railways and irrigation canals. But on the man in the street these signs of the times made little or no impression. Then came the Russian Revolution of 1917. Its effect was as great as that of the earlier events of the war had been small ; for here was the mighty Russia of the Tsars, which had overrun the whole of Central Asia and which for so many years overawed Bokhara, apparently tottering to its fall. Autocracy had been dealt a paralyzing blow by the bursting of the storm of popular discontent. What would this mean for little Bokhara ? To some it seemed that the shadow of independence which they enjoyed would develop into the substance, once the fear of Russia was removed. In others it aroused thoughts of some great internal change similar to that which was taking place in Russia. For

the Amir and his entourage, however, it brought a certain uneasiness. The people of Russia had overthrown their ruler; might not the people of Bokhara try and follow an example so near to hand? In an attempt to secure his position the Amir announced the grant of certain privileges to his subjects, but at the same time he saw that greater attention was paid to the training of his army and the improvement of its condition, and took steps to prevent the infiltration into his country of any of the revolutionary ideas which had led to the Russian Revolution. Meanwhile, however, encouraged by events in Russia, the grumblers against the Amir's régime became more bold and organized themselves into a "Young Bokharan" party, which produced a programme of far-reaching administrative reforms, including at first the reduction of the Amir's powers to a minimum, and later his abdication. With the advent of the October revolution in Russia this party, though small in numbers, redoubled its energies, and the Amir, really frightened for his position, decided to put a stop to their activities, at any rate within his own territories, and ordered the wholesale deportation of these undesirables. The new Russian Government had recognized his independence on the same lines as its predecessors, but, if he allowed such a campaign against himself to continue unchecked, he might find that despite Russian recognition his position would become untenable through the actions of his own subjects. Educated as he had been in Russia, he was fully aware that there was much truth in the accusations which these revolutionaries brought against him, and much justice in their claims.

The Young Bokharan party, checked in their endeavours by these orders of the Amir, lay dormant for a short time, but at the end of 1917 it addressed an appeal for assistance to the new Bolshevik administration in Tashkent. The latter had many troubles of its own to attend to, and had at first no time or inclination to add still further to its own burdens, but, as local affairs began to disentangle themselves somewhat, and the necessity of coming to grips with the Bokharan problem in some of its aspects became apparent, Kolesov, the Chief

Commissar at Tashkent, turned his attention to their appeal. Regardless of previous guarantees of independence given to the Amir of Bokhara by others, Kolesov could only see in the existence of an independent monarch under Russian protection a negation of all Bolshevik ideas. Accordingly he proceeded to Bokhara with a small force of Russian troops, and on March 1, 1918, presented to the Amir an ultimatum demanding the grant of a constitution to his people on the lines advocated by the Young Bokharans, and the appointment of selected members of that party to carry the new constitution into effect. The ultimatum was due to expire at the end of twenty-four hours. The Amir temporized in the hope of being able to reach some compromise, but the fiery Bolshevik was not to be put off. He at once despatched representatives to the palace to demand instant and complete compliance. While this second stage of the negotiations was in progress a quarrel took place in New Bokhara between some of Kolesov's escort and the local populace. Excitement had already risen to a high pitch over the appearance of Russian troops and the knowledge that important events were likely to occur very soon. As a result of this excitement this small quarrel developed into a general riot. The people of Old Bokhara joined the rioters in the new town, and an attack was made on all Russians who could be found. The anti-Russian feeling spread apace, and all over the north-western section of the Khanate all Russians were murdered, and with them all the Young Bokharans who had escaped the earlier orders of deportation. Only Kolesov and a part of his escort made good their escape.

After the massacre of the Russian inhabitants the Bokharan population naturally expected immediate reprisals, and, in order to ensure their being able to meet any Russian attack, from whatever direction it might come, on terms as advantageous as possible, they tore up the railway lines to delay the movement of the Russian troops and armed themselves to resist any hostile advance. But no such advance materialized. Kolesov, having with difficulty escaped with his life,

was in no mood to risk another disaster with the small force at his disposal, and before a sufficient number of troops could be collected the Bokharan position would have improved immeasurably. It was clear that the power and influence of the Young Bokharans had been lamentably overestimated, and that the Amir of Bokhara could not be deposed without overcoming the resistance of the bulk of his subjects. The number of troops available for such an undertaking were few, for the majority of the local Bolshevik forces were required to fight the White counter-revolutionaries. As a result the day of reckoning with the Amir of Bokhara for his insult to a Russian representative was postponed to a more favourable opportunity, and Bokhara was left to itself for the time being.

During the remainder of the year 1918, and for the whole of 1919, the Bolshevik Government at Tashkent was fully engaged in dealing with the menace of counter-revolution throughout Turkestan. On the north towards Orenburg, a part of the left wing of Admiral Kolchak's army under General Dutov at one time threatened an advance on Tashkent itself, and it was not until October, 1919, that this threat disappeared and direct communication was restored between Tashkent and Moscow as a result of the withdrawal eastward of this White force. Further south in Trans-Caspia British troops had been opposing the local Bolsheviks in an attempt to bolster up the provisional Menshevik Government which had been set up at Askhabad, and when orders from London caused the withdrawal of this force into Persia in the middle of 1919, White Russian troops acting under the orders of General Denikin took over the line and continued to oppose the Red advance towards the Caspian. Nor were these the only two fronts on which the Bolsheviks were compelled to fight for their very existence in Turkestan; for rebel groups had formed themselves in almost every district of the province, and in their own localities actively opposed the new administration. Little by little the counter-revolutionary movements dwindled in strength, until with the fall of Krasnovodsk at the beginning of February, 1920, the Bolsheviks could call them-

selves masters of all the plain country lying between the Caspian and the Chinese border, although the remnants of their opponents still held out in the mountains of the eastern districts. Reinforcements of troops were arriving in Tashkent from Central Russia and the danger of the complete overthrow of Bolshevik power in this outlying province of the old Russian Empire had vanished. The time had come to organize the internal administration of the country, and to this task the inexperienced officials turned their attention. Here, however, they found a task before which the most experienced administrator might well have quailed; for the revolution and anarchy which had swept over the province throughout the last two years had left their traces unmistakably imprinted on every part of Turkestan. Industrial life had been paralyzed as a result of the nationalization of all factories, and, even in cases where such institutions continued to work, their output was insignificant. The agricultural life of the country, its chief mainstay, was in a still worse plight as a result of the Communistic methods introduced by the new officials; for the individual cultivator saw little encouragement to raise his crops when he knew full well that all, or practically all, of these crops would be commandeered by the authorities; accordingly he limited himself strictly to producing just sufficient for his own needs, and no more. The people as a whole, too, sullenly resented the new régime, which had not only taken from them their means of livelihood, but which interfered even in their home life. If to these features is added the devastation caused by the actual fighting in various parts of the province, it can easily be realized how serious a problem it was that the new officials had to face. Their position, in spite of the recent Russian military successes, was none too secure; they had still active rebel forces within their borders, and the population itself in its present mood represented a latent menace; in addition to these dangers there were British forces close by across the Persian border which might seize a suitable opportunity to advance again into Russian territory. The primary need was therefore to strengthen their defences against attack

from any direction. In considering the best way to solve this defence problem, it was quickly borne in upon the local military authorities that a grave danger lay in the fact that the main artery of communication across the southern half of Turkestan, the Central Asian Railway, ran for some one hundred and fifty miles through the independent territory of Bokhara, and was liable to interruption at any time by the hostile people of the Khanate, which had given an example of its power of tampering with the railway at the time of the Kolesov incident in March, 1918. The menace of a recurrence of such an outburst of Bokharan hostility, in the event of an invasion of Trans-Caspia or of a rising of the populace in any part of Turkestan, was one which required immediate steps to eliminate ; for the forces available to meet any hostile outbreak were none too large, and only by their rapid concentration at the very start could they have any hope of dealing successfully with such a contingency. This state of affairs pointed directly to the necessity of coming to some arrangement with the Amir of Bokhara, or, better still, of bringing him under Russian control ; and there were other factors which strengthened the case for drastic action against him. In the first place the farcical agricultural policy, or lack of policy, of the local Bolshevik administration had, as has already been stated, reduced the crop returns of the whole country to a very low figure. Turkestan had never been self-supporting as regards food supplies ; no assistance in this respect could be hoped for from outside, and the local crops were barely sufficient to keep its population from starvation. Bokhara, on the other hand, was self-supporting, but the Amir had proclaimed an embargo on the export of a single pound of grain. If the Russians could obtain control of the Bokharan food supplies, then they would be able to alleviate some of the distress in Turkestan, and in this way could hope to lessen the hostility of its people towards themselves. Secondly, the existence of an independent and autocratic ruler so close to their borders was anathema to their Communist minds, while finally the insult inflicted on their representative, Kolesov, still rankled in their memories.

The Bokharan problem was, however, one which required delicate handling. The Amir of Bokhara was looked up to by all the Muslims of Central Asia, and any open attack on him might well be the signal for a general rising against the Russians throughout Turkestan, which with the forces at their disposal it would be difficult for them to suppress. Moreover, the Central Russian Government had begun to pose as the emancipator of the East from the clutches of the Imperialists and capitalists, and the overthrow by Russia of an independent Oriental monarch would give the lie to these pretensions. It was therefore absolutely essential for them to arrange their attack on Bokhara in such a way as to avoid the slightest suspicion that it was due to Russian instigation.

Here the Young Bokharan party, which had failed the Russians so signally on a previous occasion, stood ready for the purpose. This organization had been continuing its activities in a minor form in various places outside the borders of the Khanate, and, although still weak in numbers, might yet be turned in time into the necessary instrument for their purpose. The Bolsheviks therefore determined to put new life into this party, and its leaders were secretly supplied in liberal fashion with funds from the Russian Treasury. Money is the foundation of any revolutionary movement, for there are in most countries plenty of malcontents who can be bought to espouse any cause, however extreme. As a result the numerical strength of the Young Bokharans increased considerably, and their activities became suddenly more pronounced. They held meetings at which they raged violently against the tyrannies of the Amir, and their propaganda denouncing his rule spread through all the towns of Turkestan. As a second stage in the development of the Young Bokharan activities came the provision to them from Russian sources of arms and military equipment, and Young Bokharan companies and battalions came into being into which, unpromising though these recruits were, Russian instructors tried to din some idea of drill and discipline.

A. RAWSON.

(To be continued.)

DUTCH NAVAL INTERESTS IN THE EAST

BY PHILIP C. COOTE,

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IN proposing a large and well-equipped fleet for the defence of the Netherlands East Indies, the Commission, which gave long and careful consideration to the question, was apparently influenced by the possibility of an armed conflict in Eastern waters which might imperil the Dutch colonial possessions in the Archipelago.

Commercially the Netherlands East Indies is a very valuable asset to the Mother Country, and their population is about eight times as great as that of Holland. They are exceedingly prosperous at the present time, and their prospects were never better than they are to-day. The responsibility of the Netherlands Government to the Queen and the people of Holland for the safe keeping of these shores inviolate is no light one. The islands cover a wide area, and, when superimposed on a map of the same scale of Europe, the area of the Netherlands East Indies will be found to stretch from a point west of Cork in Ireland to the far end of the Black Sea. The total land area of the islands is 2,000,000 square kilometres, or, again comparing the territory with Europe, about half the size of Europe without Russia. Apart from the principal islands of Java, Sumatra, Celebes, and the Dutch portions of Borneo and New Guinea, there are many smaller islands, which, with the exception of Banka, Billiton, Singkep, Bali, Lombok and a few others, are not as yet being exploited. This will come, however, with the further development of the islands. It may readily be gathered that the coast line which it would be necessary to defend in the event of the outbreak of hostilities is enormous, since the total sea and land area covers nearly three million miles.

Now let us consider the possibility of hostilities breaking out in this part of the world. The Dutch have had some local

troubles lately, such as strikes, but these have not been of a nature to require the services of a navy, neither are any future outbreaks likely to demand the attention of a fleet costing approximately £30,000,000. It has been admitted that the proposed navy was destined to deal with outside attacks from one of the European Powers, America, or Japan! As far as European Powers are concerned, Great Britain and Portugal are the only two which now have possessions in these waters. In olden days the latter was a force to be reckoned with, but to-day her occupation of about half of Timor and the Chinese Monte Carlo, Macao, is about the limit of her power. Even if Portugal wished to acquire some of Holland's possessions among these islands, it is unlikely that she would make any unprovoked attack, even if she felt herself sufficiently strong to do so. Portugal may, therefore, be dismissed from any accusation of possessing any covetous designs on Insulinde, and nobody has ever seriously suggested that the Dutch Naval Bill was intended to thwart an invasion from this quarter.

Great Britain's possessions in this quarter lie in the Malay Peninsula, in North Borneo, New Guinea, and Northern Australia. Farther off lie Ceylon, British India, and to the east Hong Kong. To some it has seemed that the Naval Bill was aimed at Great Britain. It has also been suggested—quite erroneously—that the Bill was framed at the instigation of, or with the connivance of, the British Admiralty. On the other hand, it has been asserted in certain British journals that the Naval Bill was a direct reply to the announcement that a British naval base was to be built at Singapore. As a matter of fact, the draft of the Bill has been in existence for two or three years, long before the Singapore base was dreamed of, and the Dutch Cabinet has been considering it for over a year. The Singapore base is the outcome of the abandonment of all Pacific bases. Naturally there has been no official interference with Dutch plans by Great Britain, but for purely commercial reasons the expenditure of £30,000,000 on an unnecessary fleet, which would hamper the prosperous expansion of the islands, has been deprecated by British com-

mercial interests, and the British Chamber of Commerce for the Netherlands East Indies has voiced its protest.

For centuries the histories of Malaya and the Netherlands East Indies have been closely interwoven, and, for a variety of reasons, it is likely that their interests will coincide for a long time to come. At times Holland has been in possession of parts of Malaya, while British interests have prevailed in Java and Sumatra. Early in the seventeenth century the D.E.I. Company had the monopoly of the trade in the Straits of Malacca and among the surrounding islands of the Malay Archipelago, and for considerably more than a century the Dutch held the balance of power both in the Peninsula and in the Archipelago. During the early part of the nineteenth century parts of the Netherlands East Indies passed into the hands of the British for a brief but eventful period. Great Britain's temporary possession of Insulinde was due to the initiative of a junior official in India, Thomas Stamford Raffles, whose name is respected to-day in the Netherlands East Indies to the same high extent that it is in Malaya. It was Raffles who urged Lord Minto to launch the expedition against Java which culminated in the capture of Batavia. In 1811, Raffles was appointed Lieutenant-Governor of the East Indian Archipelago, and he proved to be one of those born administrators who exercises a peculiar power when dealing with the Oriental. His reforms in the Straits Settlements and in the Netherlands East Indies are remembered to-day, and the administrative foundations which he laid so securely still remain.

Whilst engaged in his scheme for the regeneration of Java, Raffles was informed that that island was to be handed over to the Dutch again, and on August 19, 1816, he relinquished his post to John Fendall, who carried on the work on the lines laid down by his predecessor. Raffles was then sent to Sumatra, which had not been ceded to the Dutch. In 1824, a treaty between Great Britain and Holland was concluded by which the former received Malacca in exchange for the West Coast of Sumatra, which was then ceded to Holland. Since then Great Britain and the Netherlands have carried out their

respective work in a friendly and neighbourly spirit, the two nations' spheres of activity having been apportioned by treaty. It may therefore be ruled out that those who drafted the Naval Bill had in mind Great Britain as a possible foe in the future.

America and Japan are the two remaining countries which might be considered as possible aggressors. There has existed for some years a chance that these two countries might be brought together in armed conflict, but for many reasons this is unlikely. In any case, Holland would have little to fear from such an event. Japan's naval policy, as in the Great War, would be to fight in her own waters, and for America to land an adequate force on Japanese territory would be practically impossible. Japan might conceivably attempt to seize the Philippines, but this is most improbable, especially in view of the necessity for her to recuperate after last September's calamity. In any case, any attempt on the part of Japan to seize any of Holland's Eastern possessions would immediately make enemies of Great Britain and other Western Powers. America is at present engaged in the waging of an economic war against Japan, and this is the limit to which she is likely to go at present.

The fleet which the Netherlands proposed to build was to have been called a "neutrality fleet." No exception could be taken to Holland's desire to preserve her neutrality in Eastern waters in the event of its being threatened, as she did with success between 1914 and 1918. Official German records make it quite clear that the Dutch fleet did its difficult work well, and repeated reference is made in these records to the trouble the German Imperial and merchant navy experienced in the Dutch waters of the Archipelago. But it is not easy to understand why a large fleet, costing £30,000,000, should be required at a time when the whole world is making every effort to economize and is cutting down every possible expense. The interests of the Netherlands East Indies are purely commercial, and the Dutch possessions in the Malay Archipelago have wonderfully prosperous prospects. Comparatively little of the territory has as yet been exploited, and all available

capital, both Dutch and foreign, is wanted for development purposes in which it may be profitably invested. But if the population of Insulinde is called upon to build and maintain an enormous fleet, the utility of which is extremely doubtful, it is unlikely that capital will be forthcoming to finance agricultural, mining, and commercial enterprises. Already the taxes in Netherlands India are disproportionately high when compared with the taxes in operation in British Malaya, and there is considerable dissatisfaction at the methods employed in their collection. One of the chief complaints is that taxes for many years back have not even been assessed yet, and it is likely that it will be years before they can be collected. Any proposal that will mean an increase of taxation, therefore, is extremely distasteful to the commercial community and to the people in general in the Netherlands East Indies, especially when the Minister for Finance, Mr. Colyn, has openly stated that the Netherlands Indies will have to pay the whole bill. At the present juncture, Holland's colonial possessions in the East want to be allowed to exist peacefully and to economize. It is intended that the Budget shall balance by the end of 1925, but this would be impossible if the Exchequer were faced with a bill for a fleet of warships.

During the summer it was announced that the Naval Bill would be brought before the Second Chamber of the States General early in the autumn. The immediate result of this pronouncement was the resignation of the Minister for Finance, Mr. De Geer, who, as an ardent advocate of economy, was unable to agree with his colleagues in the Cabinet in supporting the measure. He was succeeded by Mr. Colyn. In the East, too, the Government was faced with difficulties. The Governor-General, Mr. Dirk Fock, who has been making commendable efforts to put the Netherlands Indian finances on a sound footing, was unable to co-operate actively in the scheme for a larger navy. As a result of this, the naval commander in the Netherlands East Indies, Admiral Umbgrove, handed in his resignation. Vice-Admiral Gooszen was appointed to succeed him.

Violent opposition was organized in the Netherlands against the Bill, which was characterized as being the product of a pernicious military system. A petition against the Bill was signed by 1,130,000 people over the age of twenty-one, which, taking into consideration that the total population of Holland is only slightly over 7,000,000, must represent over 25 per cent. of those who were entitled to sign.

When, in October, the Bill was introduced into the Second Chamber, it met with severe criticism, both on the grounds of economy and for technical reasons. It was made a "full dress" debate, and the Premier, Jonkheer Ch. J. M. Ruys de Beerenbrouck, stated that he and his Cabinet would resign if the Bill were defeated. The technical reasons brought forward against the Bill were mainly on the grounds that the proposed fleet would be powerless against aircraft. There was no suggestion in the debate that the Mother Country did not wish adequately to maintain the safety of her possessions in the Archipelago, but there was a distinct feeling that, with the urgent demand for economy, there should be no undue financial embarrassments placed upon the territory. There was a general feeling that, for the time being at any rate, the construction of a large fleet would be an expensive and unnecessary luxury. These feelings impelled a full Chamber to reject the Bill by 50 votes to 49—a result that led to the immediate resignation of the Beerenbrouck Cabinet.

Great Britain's chief interest in the passage or rejection of the Bill lay in its ultimate effect on commerce. British commercial interests in the Netherlands East Indies have grown at a rapid rate since the war. They are very large, and much British capital is invested in tea, sugar, rubber, and other products of the islands. Already the taxation in Insulinde is exorbitantly high and in many ways unsatisfactory, although relief in the methods of collection is promised at an unspecified future date, but certainly not before the end of 1924. The burden of an extra £30,000,000 could only have a devastating effect upon commerce in the islands, and would undoubtedly frighten away the capital which is so badly needed. Many

development schemes are in prospect in the various islands for which capital must be found, and much money will be spent on those works. From the purely naval aspect, it is immaterial, from Great Britain's point of view, whether the Bill is passed or not, for we cast no covetous eyes on Netherlands India, which interests us only by reason of its rich markets. Should any attack be made by a hostile Power on Insulinde, it is probable that Great Britain would lend her moral and practical support to the Netherlands in their fight to preserve their rightful possessions.

For the time being the Naval Bill is paralyzed, but it is by no means certain that it will not be resuscitated in a modified form at a later date. Much depends on the course of political events in Holland in the near future. For the moment, the Beerenbrouck Cabinet remains in office, having been requested to do so by the Queen. But whatever may happen, it is certain that the people of the Netherlands have no desire to see their Eastern possessions saddled with an expensive fleet, which will hamper their commercial expansion.

PROCEEDINGS OF THE EAST INDIA ASSOCIATION

INDIAN PRISONS AND THE INDIAN PRISON COMMITTEE

BY SIR ALEXANDER G. CARDEW, K.C.S.I.

THIS audience is not one which requires, I take it, to be informed of the ordinary features of an Indian jail, and I propose therefore to deal especially with the inquiries made in 1919-1920 by the Indian Jail Committee with which I was myself connected.

There had been previous inquiries in India into jail administration—namely, in 1836, 1864, 1877, 1888, and 1892—but the Committee of 1920 was specially fortunate in that it met in London, where it received the most generous, ungrudging, and valuable assistance from the English prison authorities, and in that it was able to visit the United States, whence many of the most fruitful ideas in prison and criminal management have come. It also saw a few Japanese prisons, but these were not instructive, except as to how not to do it; and finally it toured through India, inspected many prisons, consulted many jail officials, and heard a large number of witnesses, official and non-official. The officials included judges, magistrates, and policemen, while among the non-officials were quite a number of gentlemen who had themselves served a sentence in prison and were thus able to give a really inside view of the matter.

The general finding of the Committee may be summed up in a few sentences. It found that in the last thirty or forty years a very great improvement had been effected in all that concerned the material and physical welfare of the prisoner. This improvement was especially evidenced by the striking improvement in health and reduction in mortality—the death-rate now averaging 18·5 per thousand

against 78·5 per thousand fifty years ago. This was the achievement of many generations of zealous and devoted officers. But the Committee found that the improvement of the moral and reformatory sides of prison life had not kept pace with that of the material side. Except for the introduction of the remission system—quite a big and important exception—little advance had been made towards making the prisons a means of reformation. And outside the prisons, the criminal administration generally had taken little note of the advance in such matters in Europe and America.

The consequence is that the Indian prisons appear, even more than the prisons of other civilized countries, to be a means rather of deterioration than of improvement. Witnesses from province after province emphasized this view. "It must be frankly stated," said one, a sessions judge in the N.W.F.P., "that present jail conditions are not such as either to reform or reclaim a prisoner in the slightest degree." "In the majority of cases," said a judge of the Bombay High Court, "a first offender leaves a jail a worse man than he enters it." "Imprisonment," wrote the Inspector-General of Police, Burma, "is a deteriorating influence: the longer the term the greater the demoralizing effect: our jails may well be dubbed 'The Matriculation Colleges of Crime.'" These views were too widespread and weighty to be disregarded.

The first requisite of jail administration, after health has been safeguarded, is a careful and effective classification and separation of prisoners, so that the young may not be contaminated by the old or the first offender by the hardened habitual. In Indian jails the need for the separation of the habitual (as the recidivist is called in India) has long been recognized, but it was found that in practice it was very far from being thoroughly carried out. In numerous cases habituals were found working side by side with first offenders under conditions in which conversation could not be prevented. In hospital it was perhaps

inevitable that the separation of the two classes should break down, but even out of hospital, and in the vital matter of separation at night, experienced jail officers admitted that mixing occurred, especially if the jail was at all overcrowded. The fact seems to be that, under the conditions prevailing in India, it is almost impossible to provide for effective separation of habituals so long as they are kept in the same jails as other classes of prisoners. The Committee accordingly recommended that separate prisons should be set apart where none but habituals would be received, and that, as far as possible, all prisoners of the recidivist class should be collected in these jails. This system had already been introduced in one province, Madras, and had there worked well, and been carried out without building fresh jails.

Even when the efficient separation of the habitual is thus provided for, there will remain many differing grades and degrees of criminality among the remaining prisoners. A rustic who has committed a crime of violence in sudden passion is in a different category from the receiver of stolen goods, who, though convicted for the first time, has carried on his trade for years. Further classification is thus necessary, and to meet the case the British prisons have created what is called the Star class, in which are placed all prisoners convicted for the first time whose history and crime do not indicate depraved or criminal *habits*. No hard and fast definition is laid down, and plenty of discretion is left to the officer in charge of the jail. The Indian Jail Committee recommended that a similar classification should be adopted in India.

After thus providing for the due classification and separation of prisoners, the question next arises as to the degree of association to be permitted among prisoners of the same class. In most Indian jails, as you are probably aware, prisoners ordinarily sleep in association, each ward containing from twenty to fifty persons or even more. It is much cheaper to build one room for fifty persons than fifty

rooms or cells each for one prisoner. Hence in all provinces the construction of separate cells has fallen behind. The Committee recognized this, and agreed that the cellular accommodation should be increased so as to provide for from twenty-five to thirty per cent. of the prison population. Some of its members wished all further construction to be on cellular lines, but this was not agreed to. The matter was hotly debated, and the arguments *pro* and *con* are set out in the report for anyone interested to read, but in the present state of Indian finance the charms of cheapness will probably prevail.

After you have classified and separated your prisoners so as to prevent contamination, you ought then to provide some directly reforming influence. In Great Britain this influence is contributed by the prison chaplain, but in India, except in the case of Christian prisoners, there has hitherto been no chaplain, or any other official provision for religious ministrations.

The absence of regular religious teaching was criticized by many witnesses and condemned by all Indian witnesses, who strongly urged the need of reform in this respect. The Indian Jail Committee considered that a case had certainly been made out. It accordingly recommended that for each jail in which there was a sufficient number of Hindu, Muhammadan, Buddhist, or Christian prisoners, a religious teacher of each faith should be officially appointed and given a small remuneration. He would be allowed free access to the prisoners of his own faith and would perform the duties usually allotted to a prison chaplain, but he would be removable summarily if he were found to have abused his position—*e.g.*, by preaching sedition. It remains to be seen whether suitable men will be found for these posts, but the attempt is one as to the propriety of which there will probably be little dispute.

Education is another humanizing agency, but experience shows that it is not much use to try and educate fully grown prisoners, especially in India, where the very elements are

absent. Young prisoners, perhaps up to the age of twenty-five, may benefit, and it was recommended that for them elementary education should be compulsory. It was also proposed to provide or improve jail libraries for the advantage of the small number of prisoners who can read.

How to find any means of recreation for the rest of the jail population remains a difficulty. No one can doubt that something ought to be done. The men are locked up between 5.30 and 6.30, too early an hour for sleep. Being confined, as they mostly are, in large wards with twenty to fifty men in each, it is too much to expect that conversation should not go on, even if the convict officer in the ward represses anything worse. It is during these hours, therefore, that some form of recreation would be useful, but how to provide it has not yet been discovered. It would certainly help towards a solution of the problem if the lighting of Indian prisons were improved. It is at present execrably bad. But even then the question of how to employ the two or three hours after lock-up in the case of illiterate prisoners remains an unsolved problem.

The one really reformatory agency that has hitherto been provided in Indian prisons is the system under which a prisoner by good conduct and industry can earn a remission of part of his sentence. This system works well, and the Indian Jail Committee recommended its extension and improvement in certain particulars. A subsidiary point of some interest was the proposal to grant the prisoner in the form of gratuity a small percentage on the profits of his labour. Such a plan has been carried to great lengths in America and is said to be very successful there, but would not suit an industrially backward country like India. Some small payment for work done in excess of the prescribed daily task would, however, be harmless and promote industry, and this was recommended. Any money so earned would be banked for the prisoner and paid him on release.

Then came the question whether the prisoner should be

allowed to spend part of this gratuity on luxuries—sugar, curds, and tobacco. On this question differences of opinion among witnesses were acute. One view was that it would reduce the deterrent character of jail life if these luxuries, and above all tobacco, were to be openly allowed. Others argued that as tobacco can be got in any jail by any man who has the money to pay for it, it would be an improvement to grant it as a reward for and an incentive to industry. One witness remarked that the only people likely to object would be the warders, whose illicit trade would be affected. The Jail Committee recommended that the question should be put to the test of experience, the grant of the right to purchase these delicacies being tried in a few selected jails and its effects noted.

Another controversial matter in connection with the remission system was the plan of employing convicts who have earned a certain amount of remission as convict officers, giving them certain carefully regulated authority over other prisoners, and certain rewards and privileges. This system is widely practised in Indian prisons. It is vehemently claimed for it by its supporters that it furnishes an unrivalled stimulus to good conduct, and that it saves the prisoner from the deadening influences which are among the worst effects of a long sentence. The claim seems in both respects to be well founded, but whether it is justifiable to do this at the risk of possible injury to other prisoners is a debatable point. At any rate the Indian Jail Committee found that the employment of convicts as prison officers had been carried to great excess in several provinces—*e.g.*, the United Provinces, and also that the rules intended to safeguard the working of the system had been seriously infringed. The Committee recommended that the grade of convict warder should be abolished, thus largely reducing the number of prisoners employed as convict officers, and that the staff of paid officers should be increased. To abolish convict officers altogether would involve an expenditure not at all likely to be undertaken under present conditions.

The fact that it has been found necessary in India to employ convicts as officers with a view to build up their self-respect, and save them from the deadening effects of imprisonment, is itself a striking commentary on the evils inseparable from any system of imprisonment. Many sentences are too long and might be shortened with advantage. The Government of India had already recognized this, and in 1905 had adopted a system under which all life sentences are brought under revision when fourteen years have been completed. The Jail Committee recommended the extension of this idea. It proposed that a Revising Board, composed of the Inspector-General of Prisons, the local sessions judge, and a non-official appointed for the purpose, should sit once a year at each jail and consider the case of each prisoner who had completed half his sentence (two-thirds in the case of habituals). Such a Board would have much fuller information before it than the convicting court had, for, besides the records of the original case, it would have the record of the man's behaviour in prison, the opinion of the medical officer as to the man's mental condition, and the opinion of the magistrate of the district where the man's home was, as to the local effects which his release might have. The Revising Board would then either recommend the prisoner's release, with or without conditions, or decide to make no recommendation, whereupon the prisoner would continue to serve out his sentence. Such a system would seem at once safe and salutary so long as the Revising Board can be trusted to do its duties honestly. How this system will work now that the government of India is in Indian hands remains to be seen. Probably the Brahman and other dominant castes will benefit, while the Panchama will stay to finish his sentence. After all, such a result will be eminently in accord with the sentiment of Indian Society.

It may be of interest here to note the strong current of opinion among the Indian witnesses who appeared before the Jail Committee in favour of varying jail treatment in

accordance with the social rank of the prisoner. It was strongly urged that all prisoners should be treated in accordance with their station in life, and should be given better food and clothing and lighter labour if they come from the well-to-do, educated classes. An Indian official of high rank said: "These people are cultured people like you and me, and ought not to be made to mix with regular criminals." The Indian Jail Committee could not accept this view. Culture and social advantage may well be regarded as an aggravating circumstance rather than excuse for crime. It is true that in Great Britain imprisonment in the Second Division is not unfrequently awarded on the ground of social status, but account is also taken of the character of the prisoner's crime, and for a really serious crime the well-to-do and the educated have to serve under the same conditions as anyone else. I do not think that the English law has openly recognized class as a ground for discrimination in prison, and to do so would be manifestly contrary to principle.

Still more important than the shortening of sentences of imprisonment is the removal, as far as possible, of unnecessary causes of committal to prison. Short sentences, in particular, are universally condemned as demoralizing and as paving the way towards recidivism. In England remarkable success in preventing committal to jail has followed from the simple expedient of giving people greater facilities for paying fines. The number of persons imprisoned in default of payment of fine in England and Wales has fallen from over 100,000 in 1903 to 16,021 in 1922. In India 800,000 persons are annually sentenced to fine, and many go to jail in default of payment. The Committee recommended the amendment of the Indian law on this subject on the lines that have been followed in England.

Further to prevent committals to prison, other alternatives are required. In the United States the probation system has received an immense development, but that is

a subject in itself. In England the imprisonment of children has been entirely, and that of young persons almost entirely, prohibited, and a vast network of industrial and reformatory schools, and philanthropic leagues and associations—clubs, boy scouts, and so on—has been created to look after juveniles who are in danger of going wrong. In India the whole of this machinery is absent and will have to be built up, and, what is worse, the conception of organized philanthropy is foreign to the country and will grow slowly, if at all. Fortunately, except in the big towns, the number of children coming before the courts in India is small, and it is only in the large centres that detention homes, children's courts, and probation management will be much wanted. The Indian Jail Committee made a series of recommendations for dealing with this subject, but no very rapid progress is, I fear, to be expected. They also recommended an amendment of the law dealing with release on probation (Sec. 562 of the Criminal Procedure Code), and an amending Act has since been passed.

In India, where there is as yet no regular system of release on probation, it is important that the prisoner on leaving jail should be able to turn to some authority for assistance in finding work. This has been recognized to some extent, and discharged prisoners' aid societies have been brought into existence in several of the Presidency towns. In some cases, notably in Calcutta, a very promising and praiseworthy beginning has been made. But most Indian prisons are still without any such machinery for assisting released prisoners. The Indian Jail Committee strongly urged the necessity for forming a society for each central and district jail, the local societies being connected with a central association in the Presidency town. It was suggested that the superintendent and medical officer of the jail and the sessions judge or district magistrate should be *ex-officio* members of the managing body of the society, as without such official countenance and support these

associations have not been always successful even in England. The Jail Committee also emphasized the importance of appointing non-official visitors to each central and district jail, a matter which had been neglected in some provinces. These visitors might be of great use as members of societies for the aid of prisoners released from jail.

It would take too long to examine all the other matters, and in particular those affecting jail establishments, which were dealt with in the Jail Committee's report, but there are two other subjects which require a brief notice. One of these is the system of transportation to the Andaman Islands. The originators of this system looked forward to the islands becoming a settlement on the Australian model, where the convict, after serving his sentence, would settle down with his family and found a free community. Unfortunately, owing to the unhealthiness of the climate and other causes, these hopes were disappointed, and the settlement, as such, was not a success. As a penal establishment, also, the system left much to be desired. A prisoner on arrival, after a preliminary period in a cellular prison, was usually sent to an outlying station at a considerable distance from headquarters and often reached by water. Here he was confined in barracks in association with prisoners of every degree of criminality, guarded only by convict officers, and entirely without any kind of improving influence. After spending ten years or more in these conditions and in this atmosphere, he might be released and allowed to work as a self-supporting convict, earning his living either on the land or as a servant or artisan. He was now allowed to marry, but the supply of women was so entirely insufficient that there were only some 200 women to 1,300 men, or a proportion of one woman to six men. It was not surprising in these circumstances that there was much immorality, and that any man who retained any decent feeling desired to get away from the islands.

The question before the Committee was whether the system should be mended or ended. It could doubtless be mended, but at the cost of such heavy expenditure that it would be cheaper to keep the prisoners in Indian jails. Moreover, the climate of the Andamans, with its very heavy rainfall, was unsuited for prisoners from most parts of India, and the enormous numbers to be dealt with—the average population was about 12,000—rendered it an impossible charge for any one man. After very full examination the Committee recommended that the system of deportation should cease as soon as possible, except in the case of a small number of specially dangerous prisoners, who could be accommodated in the cellular jail and kept there under proper supervision. Unfortunately, owing to the insufficient accommodation in Indian jails, it is impossible to bring back the men already in the islands, and I fear that it will be some time before the despatch of fresh prisoners is entirely put a stop to, for the alterations required in the law are in themselves complicated and difficult, and have not yet been worked out.

The second matter I would like to say a few words about is the system of settlements for criminal tribes which in recent years has been inaugurated in most provinces of India. These tribes, as is well known, generally consist of persons with whom crime is a hereditary occupation. Many of the tribes are nomadic, and have been wont to wander from district to district, passed on by the police of one jurisdiction to that of the next, pilfering or committing more serious crime as opportunity offered, and practically without any chance of settling down or earning an honest livelihood. Of late years a serious attempt has been made to grapple with this problem. The wandering gangs have been compulsorily settled down at places selected by the Government. Land has been provided or occupation in the neighbourhood has been found for them. Houses have been built, schools established, medical attendance provided, and for each of these compulsory settlements a paid super-

intendent has been appointed, sometimes an official, sometimes a missionary, most often an officer of the Salvation Army. It cannot be said that no mistakes have been made or that no failures have occurred. But where the sites for the settlements have been well chosen, where they have been placed under suitable supervision, and above all where the settlers have been given a reasonable chance of earning a good wage or living, very hopeful results have been obtained. In such cases crime and desertions have been few; the people have to a great extent settled down; and it seems to be established that these so-called hereditary criminals are quite ready to turn from their predatory habits and take to industry providing it is made sufficiently remunerative. The outlook in such cases is especially bright for the rising generation. Time is, of course, required to test and establish the success even of the most promising settlements, but the omens were favourable, and it was a pleasant episode in the Indian Jail Committee's labours to come on these settlements where men and women of British and American race were devoting their lives to the work of uplifting these outcast and friendless members of the Indian community. //

In the foregoing remarks I have dealt mainly with what the Committee proposed, not with what the Government have done on its recommendations. Papers recently received enable me to add a few words on the latter point.

The abolition of transportation to the Andamans has been accepted in principle, and the deportation of women has, I believe, ceased, while that of men has been reduced as much as possible. That is to me a sufficient justification of, and reward for, the Committee's labours. The Government of India have also approved of the principle of providing separate jails for habituals, and of the creation of a Star class for persons not of criminal habit. These are valuable improvements in internal jail management. Legislation to reduce commitments to prison in default of payment of fine, and to amend Section 562 of the Code of

Criminal Procedure, so as to remove difficulties in its application to first offenders, has been passed, and the principle of bringing longer sentences under revision when half the term has been served has also been accepted.

Most other matters have been left to the discretion of Local Governments, and the practical decision will depend on local officials. The more advanced Governments will doubtless move first, and gradually drag the other Provinces into line. As I anticipated, only thirty per cent. of accommodation is to be cellular, so that a majority of Indian convicts will still sleep in association, with all the evils that entails. There seems to be a unanimous disinclination to reduce the employment of convicts as convict officers, and this convenient though dubiously sound system will continue to flourish. In the matter of providing regular religious instruction, education, libraries, and recreation for prisoners, it would be unwise to expect rapid progress. India is not a rich country, and is expending its spare cash at the moment on polling-booths rather than on prisoners. After all, one can't have everything; and I hope that the Indian Jail Committee's report will exercise a gradual influence, and will at least serve to point the way towards the ideal.

DISCUSSION ON THE FOREGOING PAPER

A MEETING of the East India Association was held at Caxton Hall, Westminster, S.W. 1, on October 22, 1923, when a lecture was read by Sir Alexander G. Cardew, K.C.S.I., on "Indian Prisons and the Indian Prison Committee." Sir Edward R. Henry, Bart., G.C.V.O., K.C.B., C.S.I., was in the chair, and the following ladies and gentlemen, among others, were present: The Right Hon. Lord Pentland, G.C.S.I., G.C.I.E., General Sir Edmund Barrow, G.C.B., G.C.S.I., Sir Lionel Davidson, K.C.S.I., and Lady Davidson, Sir Frank C. Gates, K.C.I.E., C.S.I., and Lady Gates, Sir Patrick Fagan, K.C.I.E., C.S.I., Sir Alfred Chatterton, C.I.E., Sir Herbert Holmwood, Sir William Owens Clark, Sir Francis Du Pre Oldfield, Lady Cardew, Lady Scott, Colonel M. J. Meade, C.I.E., and Mrs. Meade, Mr. F. H. Brown, C.I.E., Lieut.-Colonel W. B. Lane, C.I.E., I.M.S. (retd.), Lady Scott Moncrieff, Mr. J. E. Ferard, C.B.E., Mr. N. C. Sen, O.B.E., Mr. F. S. Tabor, Mr. J. B. Pennington, Miss F. R. Scatcherd, Mr. F. J. P. Richter, Mrs. Jackson, Miss Hopley, Miss Shaw, Major G. W. Gilbertson, Mr. G. C. Gilbertson, Mrs. Drury, Mrs. Martley, Miss R. Powell, Miss Wills, Mr. F. H. Skrine, Miss Green, Mr. H. R. H. Wilkinson, Mr. H. A. P. Genge, Mrs. Leslie Moore, Mrs. Tate, Miss Sidgwick, Mr. R. Sewell, Mr. and Mrs. G. M. Chesney, Mrs. E. Rosher, Mr. H. M. Gibbs, Colonel and Mrs. A. S. Roberts, Miss Partridge, Miss Pym, Miss Kenworthy Brown, Mrs. Floyd, Mr. O. Lloyd Evans, Major Cardew, Miss Alexander, Mrs. Beauchamp, Mr. F. C. Channing, Mr. A. R. Nayyar, Colonel C. L. Swaine, I.M.S. (retd.), Mr. and Mrs. S. D. Pears, Captain Rolleston, Miss Collis, and Mr. Stanley P. Rice, Hon. Secretary.

The CHAIRMAN: Ladies and Gentlemen—I am sure no words of mine are needed to introduce Sir Alexander Cardew. As you know, he is a distinguished member of the Indian Civil Service; he has passed most of his time in Madras, where he has held all the highest administrative posts, and he was on the Indian Jails Committee. So you could not possibly have anyone more competent to give you information about the condition of the jails than Sir Alexander Cardew. I propose, with your approval, when Sir Alexander Cardew has read his paper, to offer some remarks myself, limiting myself very strictly to time, because such a number of issues have been raised in his paper that if we attempted to deal with them at any length we should be sitting here until to-morrow night. After I have made a few remarks I will call upon others to continue the discussion.

The LECTURER then read the paper.

The CHAIRMAN: Ladies and Gentlemen—Now that we have heard Sir Alexander Cardew's paper, we cannot but realize what great improvements are needed in prison administration in India—or, perhaps, it would be fairer to say, in the conditions under which sentences of imprisonment have to be carried out—to ensure that during the currency of his sentence the prisoner shall come under influences reformatory in nature and likely to eliminate those tendencies which impelled him to crime in the first

instance. The one bright feature in Sir Alexander Cardew's review is the wonderful improvement in the physical and material condition of the jail population. The mortality is now something less than 20 per 1,000—it was only just under 80 per 1,000 when I went out to India—and if a corresponding improvement in the moral and reformatory conditions had been brought about, I think we might say that the present jail administration in India had almost touched the high-water mark of efficiency; but the Indian Jails Committee of 1919-1920, after a protracted and very painstaking enquiry, in the course of which they visited prisons in India, in this country, and in other countries, have been compelled, by the evidence which their visits forcibly brought before them, to endorse the view that in India the prisoner leaves jail worse than when he entered it. That is an unhappy state of things, and the question is: Can it be remedied? Sir Alexander Cardew clearly indicates in his paper, reading between the lines, that what is needed is segregation. That is the first essential step; to shield the first offender from contamination by the hardened criminal, to shield him from contamination by a man whose past clearly demonstrates that he has elected to live a life of crime. But how is this segregation to be effected? It can only be effected by making great structural changes in the prisons and by making considerable additions to them. To carry these out on any large scale would represent a charge upon the finances of the country which they cannot, in their present state, bear; but surely some beginning might be made. These changes might be made in a few selected districts, and others included as finances permit. In my opinion, the matter of segregation is at the root of the whole question.

As regards habitual and first offenders, it would be interesting to learn from Sir Alexander Cardew whether the definition of "habitual" for administrative purposes is satisfactory. It should not be necessary to prove a previous conviction in the case of a receiver or a burglar; of all those who commit offences against property the receiver is certainly the most troublesome, because, being a wily and experienced person, he manages to escape the police drag-net, and continues to flourish. It is also pretty certain that when a man commits a burglary it is not his first lapse into crime. Burglary is the work of a professional; I do not think there can be any doubt about that. Now that the police have an effective means of identification, it would be quite easy for them to have yearly statistics from which one could ascertain whether recidivism is increasing or decreasing. An ascending curve would indicate that it was increasing, and the inference would be that imprisonment was not having sufficient deterrent effect. These statistics, obtained over a number of years, would prove very helpful to the administration, I am sure. In addition to providing for reformatory influences in prison, it seems to me essential that a sojourn in prison should be made so irksome that no one would wish to return there. (Hear, hear.) It should be a very unpleasant experience, to say the least of it. Unless it is made a painful experience, you will have what happened, I have heard, in the Central Provinces many years ago. The officer in charge of a jail who was very popular with the prisoners was under orders of removal on promotion,

so the prisoners sent a petition to the Government saying that if he was removed they would not return to prison.

The question of short sentences presents peculiar difficulties in India, because outside the larger towns—indeed, I might say outside the presidency towns—there is no agency available, on any large scale, by means of which the system of probation, which has given such wonderfully good results in this and other countries, could be carried out.

There are other points I might touch upon, for many issues have been raised, and as there are many present anxious to discuss them, and I have already taken up more of your time than is my fair share, I will call upon them to continue the discussion. (Applause.)

Mr. F. H. SKRINE said that his experience of Indian jails was "extensive and peculiar." A man who was placed in the position of Superintendent of a jail was on the horns of a dilemma; on the one hand, he wanted to make the jail population happy, whilst, on the other hand, if he did so, the jail would lose its deterrent effect. It was essential for jail labour to be irksome. During the Madras Famine, he was appointed Superintendent of the Salem Central Jail, which contained a population of 3,800. But many of the prisoners were not criminals; they were starving people who had got into prison by committing some trivial offence in order to get food. Among others, he had forty or fifty Chinese murderers from Shanghai and Hong Kong under his care. Murderers were very often not criminals at all: in many cases a man was not responsible for his actions when he took human life, though he was perfectly sane when he came to trial. These Chinese murderers were mostly docile and ingenious; but his trust in them received a violent blow. The Bible Society sent out a large copy of the Chinese Bible and asked that it might be read to the prisoners. He gave them the book, with which they were delighted. It was read every evening in the jail, and when they went out for outdoor labour the Bible was carried with them in procession. However, he received an anonymous communication about its contents; and one day, when they brought it back, he examined it, and found that it had been hollowed out and was filled with opium! In the prisons of Bengal, many years ago, prisoners were allowed to cook their own food; they received raw rations, which they cooked over small fires. In 1834 a rebellion broke out in the Alipur Jail, Calcutta. The prisoners attacked Mr. Samuells, magistrate of the Twenty-Four Parganas and *ex-officio* Superintendent, overpowered his guard, and beat him to death with their brass *jotaks*.

The Right Hon. Lord PENTLAND said that he had listened to every word of the Lecturer with the greatest possible interest. It opened a very wide field for official endeavour in India to raise the condition of the jail administration. He desired information upon one point which had not been touched upon by the Lecturer, whether some improvement of the individual prisoner might not come from the encouragement of industrial occupations within the jails. He was not thinking of such high standards of industry as the Agra carpets, but of more ordinary occupations, such as workshop training in wood and metal. Training in trades in

prison was very largely applied in other parts of the world. Sir Alexander Cardew's knowledge of the subject was so extensive that he was sure the meeting would welcome any information which he was able to give on this aspect of the question. A higher standard of public feeling in India was required to support such a system, otherwise the administration would have difficulties to contend with which were unheard of and almost unimaginable in England.

Lieutenant-Colonel LANE said he first joined the Jail Department in India in 1900. In 1907 the Governor of the Andamans suggested the abolition of the Penal Settlements there. At that time he was Inspector-General of Prisons in the Central Provinces. He made a suggestion that the ordinary casual person who committed a murder under the impulse of the moment was not a bad man, and suggested that the Andamans should be kept for those men, but that the habitual criminal should be sent to the Sind Desert to work on irrigation canals. In 1916 it was decided to employ the prisoners in Mesopotamia, and he was placed in charge of them. At one time there were 10,000 to 12,000 prisoners working on railways and canals and other work. They made good, and, in fact, several were appointed to posts after the British Forces left Mesopotamia. He had suggested before leaving Mesopotamia that they might continue to use the Indian prisoners much in the same way as the French Foreign Legion, but that suggestion had not been accepted. The important thing was to provide work in the open air. When every form of evil, malice, revenge, and all uncharitableness was being nursed by the prisoners themselves within the prison walls, the only hope of reformation was in the open air. In India, prison camps should be formed for work on the Sukkur barrage and on the irrigation schemes connected with it. In England, the prisoners' labour might be utilized for the reclamation of the Wash. Such work is an incentive to a prisoner, because he feels that he is doing something useful. The effect of church services, lectures, etc., is to take the prisoner out of his surroundings for the time being. What is true of the physical, that disease and ill-health are bred in dark closed-in places, is true of the mental, especially as regards crime. The natural remedy for both is sunlight, open air, and free exposure to the purifying influences of heaven. There is not the same incentive to think evil and nurse revenge in the open air. I have known visitors to a jail after a short time say that they could not stand it any longer. The mental atmosphere or aura, as some call it, is always bad, and in some cases overpowering.

Sir FRANK GATES said there were three aspects of punishment—the reformatory, the deterrent, and, a third, closely connected with the deterrent, the vindictive. At the present time it was considered almost uncivilized to mention the vindictive aspect of punishment, but he thought it would be conceded by those who had been familiar with the administration of prisons that, unless some account were taken of the vindictive aspect, society would be in danger of still worse evils. If there was any slackness in the administration of the law, so that the chances of the conviction of the criminal were small or the penalty was derisory, the private person was disposed to take revenge into his own hands, and the last stage

would be worse than the first. We should be in danger of lynch law and vendettas if we took no account of the vindictive aspect of punishment. While we should make prisons places of reformation, they should not be places of a derisory penalty.

With regard to convict officers, in former days it used to be considered that the employment of convict warders was desirable, because most of the offences committed by prisoners were assisted by the paid staff. Perhaps the Lecturer could give some information on this point.

Mr. PENNINGTON asked if there were any allegations of torture in the jails made to the Committee, and whether any were proved.

Mr. WILKINSON said that detention in jails was often no deterrent to certain of the degraded classes in India, for the standard of comfort in an ordinary jail was very much superior to that of a large portion of the population, which led to persons after being discharged committing crimes in order to get back to prison again.

Miss SCATCHERD thought the remarks of the last speaker pointed to the duty of all concerned to improve the social environment. She remembered when in the Middle East meeting a very respectable man who was acting as driver of their carriage. It was at the time when the question of old age pensions in England was being discussed. This man said when he became old he would have to commit some little crime in order to get into prison, because there was no Lloyd George in their country to provide for them. How was it possible to make the prison experience painful, irksome, and "vindictive," and yet send the prisoner out a better man? She would like to know more about the women criminals and convicts in India. Perhaps there were none, or they were not so numerous; would it not be possible to allow the prisoners to exercise some recreative art or craft of their own choice for their own benefit in order to occupy and amuse them? Surely, with all the modern desires for the benefit of their fellows which they saw manifested on all hands, volunteers might be found to organize activities in some such direction.

Lady SCOTT said that her father, the late Mr. Frederic Hill, was Inspector of Prisons for Scotland. He changed the whole face of prison discipline in Scotland. His first act on becoming inspector was to turn the treadmill out of every prison. Another reform he introduced was that a prisoner might do extra work (extra to that he was bound to do for the prison) if he liked. For this he was paid. So when he left the prison he had a small sum of money in hand and could pay for a decent lodging and was not obliged to return to his old pals to get help. My father was strongly opposed to capital punishment. It had not, he said, the deterrent effect that it was commonly supposed to have. A criminal prefers really a very small chance of the law's severest punishment to the much more sure prospect of a long term of imprisonment. Innocent men have been hanged. Fresh evidence was forthcoming, but it was too late. If the punishment is imprisonment for life, an error can be remedied.

My father used to say that he could sum up his principles in three words, "Cure or Keep."

Mr. STANLEY RICE said that when in India he used to get from Govern-

ment—probably from Sir Alexander Cardew himself—periodical exhortations to discourage short sentences. He in his turn duly exhorted the various magistrates that they must not give short sentences. Then the question being raised about girls. The matter was a very difficult one, and one magistrate had said to him : " We cannot give long sentences ; we are not allowed to give short sentences ; if a girl is fined her parent pays the fine ; you cannot beat her, because she is not a boy, and there is no reformatory school for girls. What are we to do ? " To this his reply, like those of the Germans, was evasive.

Mrs. MARTLEY asked for information concerning the treatment of purely political prisoners.

Mr. NAVYAR asked if there had been any improvement in the prisons in the Native States.

Sir ALEXANDER CARDEW, replying to the discussion on his paper, said : Ladies and Gentlemen—With regard to the question last asked me, I am afraid I cannot give any real information regarding the prisons in Native States. The Jail Committee did not visit any prison in any Native State, and anything I could say would be mere hearsay and of no value to the questioner.

As regards the question of political prisoners, I saw some of them in Alipore Jail, where they were being treated with, I thought, rather exceptional consideration and kindness. On the other hand, in the Central Provinces, the Sikh prisoners were having an extremely bad time, largely because of their own misconduct. They had created such a panic in the jail that the officers were afraid to take them out of their cells, and the unfortunate men were spending their whole lives shut up in small cells, except for going into a small yard outside. This was due to their own misconduct. The political prisoners in the Alipore Jail were treated quite as well as Second Division prisoners in England or better. The Committee received a great many suggestions that political prisoners should be treated differently from other prisoners, but we were unable to see that a crime because it is committed with a political motive ceases to be a crime and ought not to be punished as a crime, or that a man who commits murder or dacoity or robbery, because he thinks the Government is a bad one, should have a better time in prison. One object of imprisonment must be to repress the recurrence of crime.

Miss Scatcherd asked for information regarding the subject of women convicts. They are a very small proportion compared with the total jail population of India. Owing to the social customs which surround women in India they have not the opportunity of committing crime, and when they do they are generally dealt with by the male members of their family. Their husbands chastise them, and they accept it as being the proper and legitimate mode of correction. The number of women who find their way into prison is small. It is difficult to provide proper classification and separation for them in a small jail, and if they are taken long distances and brought together in a large central jail it has a very demoralizing influence on them, as it increases the feeling of hopeless separation from their homes and relations.

With regard to prisoners working for their own benefit in their leisure hours, I think after a man has done his day's work in the prison he is not very anxious to do work in addition, and the prisoners would have to be placed under very special guards and special arrangements would have to be made for their being looked after. As I mention in my paper, the lighting in Indian prisons is extremely bad. It generally consists of a few oil lamps scattered about very large quadrangles or yards, and it is almost impossible to turn prisoners out after dark. As the day always ends practically at the same time, from half-past five to six—at any rate, in the part of India with which I am acquainted—there are no long evenings during which the prisoner could work, and the difficulties of guarding them would make it almost impossible to carry out any scheme for working outside the sleeping barracks.

With regard to the comparative advantages of a paid staff and a convict staff, the question really resolves itself into one of finance. If you could get a properly paid staff, I suppose all would agree that a man who has not committed a murder is likely to make a better officer than a man who has; but if you give a jail warder a rate of pay which is about equal to that of a common coolie, you do not get a very high standard of men. One of the recommendations of the Jail Committee was that the rates of pay of these officers should be greatly increased, so that we might try to get men with some degree of education to do those duties. If you had a good class of paid officer he would be more likely to exercise a good influence over the prisoners than even the best-hearted murderer you could pick up, though I agree generally with Colonel Lane that a murderer is often rather an estimable character when he is within prison walls.

With regard to the question of employment, which Lord Pentland and others mentioned, that presents great difficulty. The Public Works Jails, which I have seen in the Bombay Presidency, are very successful, but there is a limit to the extent to which that form of occupation can be used. In the first place, you can only put a man on that sort of work who is in hard physical condition. You cannot take a man out of a shop and make him do hard physical labour. Again, it is very difficult to provide such works, which have usually to be in unhealthy localities, and you generally find that there is a great deal of sickness in Public Works Jails. There is plenty of sun, but there is also malaria, and it is a very difficult matter. If you can find really suitable public works then, I think, it is both deterrent and healthy; but it is difficult to find the works, and our general impression in Bombay was that that method of employing prisoners could only be used to a very limited extent. The industrial training which the prisoners receive in jail is useful, but there again it is limited by the conditions of the country. The agricultural labourer predominates, and the agricultural labourer, even if he learns a trade in jail, when he is released goes back to the fields. Caste almost prohibits his taking up a trade that does not belong to his caste, so that although those who are carpenters or artisans of any class who get training in jail benefit by it, the number is small and the net result is probably not very great.

I think it would take too long to go into the general question as to

whether imprisonment should be deterrent or reformatory. I think the habitual criminal wants hard treatment. The recidivist has failed to be reformed in the early stages, and therefore his reformation in the future is unlikely. A great many of the first offenders are not any worse than other people, and I am in favour of using the maximum amount of reforming influence upon them. The difficulty in India is to find it. Public spirit in India is unorganized. The Indian has no conception of public organized philanthropy such as has grown up during centuries in Europe, and until that spirit is developed it will be found very difficult to find workers to carry out the supervision of men on probation or any of the other numerous branches of reformatory work such as are carried on in England.

There is an Indian saying that if you place milk and water mixed before a swan the intelligent bird will take up only the milk. I am sure that in thanking you for the kind way in which you have received my paper, and the kind remarks you have made on the subject, I may correctly attribute to you the same faculty as the Indian has attributed to the swan. (Loud applause.)

The CHAIRMAN: Ladies and Gentlemen—There has not been any conflict of opinion among you upon the various issues raised, so that there is nothing for me to review. Sir Alexander Cardew has cleared up one or two points. He is perfectly right, I think, in saying that owing to the existence of caste it is not much use attempting to teach a prisoner a trade in jail which he will not be able to practise when he gets back to his village; it is pure waste of time.

Now that we have heard the views of so many speakers, I think we ought to concentrate upon one main point, and that is segregation. Sir Alexander Cardew has told you that there are wards in Indian jails with as many as fifty prisoners, habituals and first offenders, mixed up together, and that these wards are execrably lighted. What must be the condition of things throughout the long night? This represents an appalling condition and one needing remedy; we ought, therefore, to concentrate upon this one point, and apply such pressure as may be possible to ensure that there shall be gradually introduced a more effective system of segregation. All other are minor points. With an effective system of segregation it should be possible for prison administrators to introduce gradually all the other improvements. Without segregation no radical improvement can be looked for. (Applause.)

Colonel MEADE proposed a hearty vote of thanks to the Chairman and Lecturer, which was carried by acclamation.

The CHAIRMAN having thanked the meeting on behalf of the Lecturer and himself, the proceedings terminated.

Sir RICHARD TEMPLE writes: "I regret that I was unable to be present at the reading of Sir Alexander Cardew's paper, and welcome an opportunity to take part in the discussion. Although it is now twenty years since I left India, I was for ten years Chief Commissioner of the Andaman Islands and Superintendent of the Penal Settlement at Port Blair. I was, therefore, considerably responsible for what went on there. I explained the Settlement

system at length, first at Queen Victoria's Diamond Jubilee and then in the first Census Report of the Andamans in 1901. I have twice lectured on the Indian Penal System in England, and explained it to the Society of Arts in 1899, and to this Association in 1914. These documents are now, perhaps naturally, forgotten. At any rate, they are not taken into consideration by Sir Alexander, either in the Report of his Committee, or in his lecture. Another preliminary remark is necessary: as long as I can remember the Indian Jail Department has desired to abolish the Andaman Penal Settlement. The jail officials never understood what a penal settlement meant.

Sir Alexander's Committee followed the old line: no good, in its opinion, could come out of the Andamans. But once again I wish to point out forcibly that a penal settlement is not a jail, though it naturally has jails in it. It is a community, and must of itself carry out *all* the duties of a community in order to live. It differs from an ordinary community in that the majority of its members must of necessity be persons convicted of the most serious crimes, the convicts providing the whole of the labour. It is, therefore, not a community of ladies and gentlemen, and it must be governed by specially adapted laws. I have carefully read the Report of the Indian Jails Committee of 1919-20, and the impression I have imbibed is that the Committee failed to understand the Indian penal system. It never grasped that it is not a jail system, and never knew that it has a longer consecutive history than that of the jail system of India. In my judgment its attitude towards those who had worked it in various places for well over a century and a quarter was unfair and unjust; and there are two remarks of Sir Alexander that I am fairly entitled to resent. At p. 276 the Report says: "It is not too much to say that absolutely no attempt whatever to provide any kind of reformatory influence on the convict has ever been made." At p. 58 of his lecture he adds: "It was not surprising . . . that any man who retained any decent feeling desired to get away from the island."

Such charges are easily made, and cannot be answered in a brief space. I must, therefore, refer those interested to the documents already quoted for details, and content myself with the remarks that in my time and before it the aim of the penal settlement, based on the view that the difference between convicts and other human beings lies in capacity for self-control, was to educate the outcasts it received into self-respecting citizens, habituated to fend for themselves in an orderly way; and that the penal settlement was a huge reformatory aiming at turning the naturally uncontrolled into self-controlled members of society by continuous education over a long period in self-restraint. As a notable matter of fact, the observation I would here make is that the special difference between the result of the penal settlement and an ordinary jail is that, while the released transported convict is a man fitted and habituated to support himself, the prisoner from a jail is not only a pauper, but has become pauperized—that is, he has become unaccustomed to fend for himself, and this disability has grown upon him with the length of his imprisonment. To my thinking, the Jail Committee never really grasped this and many other cardinal points in forming its judgment on the rival method of dealing with convicts.

I have no space to go further into the Report and lecture, but had I been able to be present at the latter, I would have liked to ask two questions. What became of the system introduced towards the end of my time of destroying mosquitoes? It at once greatly reduced fever at Viper Island, a haunt of malaria. And what became of a system of First Aid teaching introduced as a reforming instrument among the well-behaved men and women convicts? Many of them took an absorbing interest in it, to my belief, no doubt to their good. The first translation of the First Aid book of the Order of St. John into an Indian vernacular was made at Port Blair.

Just before my time another reforming committee visited the Andamans and reduced the convict population to about 7,000, but that establishment was soon increased to about double, for reasons of administration. Despite the Jail Committee's Report, I have a feeling that the long trial of the Indian Penal System is not yet dead, and that financial and administrative necessities will oblige the Government to keep it alive. Perhaps some day it will meet with justice.

Lieut.-Colonel P. W. O'GORMAN, C.M.G., M.D., M.R.C.P., D.P.H., I.M.S. (RET.), writes: As an old jail official, with experience in Bengal, the Punjab, and North-West Frontier Province, I may be kindly permitted to offer, within my limited space, some suggestions to supplement Sir Alexander Cardew's interesting and informative paper, at the reading of which I regret I was unable to be present. It strikes me that unless we understand what the fundamental principles are that should guide us in the imprisonment of criminals (employing this term in its widest sense), our efforts to improve jail administration will be gravely hampered. Indeed, expediency will supplant ethics, and we shall retrograde rather than progress. And it is because of the Government of India, the local Governments, and the prison authorities generally, losing sight of these vital factors, that cause has been given to those judicial and police denunciations quoted by Sir Alexander. It is truly shocking and indignation-rousing to think that the Indian system of imprisonment results in nothing but the gravest demoralization of its victims. The responsibility of all the Governments and authorities concerned must be brought home to them if any radical reformation is to result.

What, then, are these principles? First, *the end of justice is the upholding of the moral law*. Second, *the civil law derives its authority from the moral law*—that is, from its Supreme Law-giver; and it cannot go counter to it. Third, *the State is not the lord and master, but the servant of the citizen*, and government exists for the good and utility of the citizen. Fourth, *the State may punish* (1) to protect the life or rights of individuals, or (2) to preserve the social life of the commonwealth. Fifth, in the defence of social order, in the penalizing of the criminal, who is thus an unjust aggressor, *the State must satisfy four conditions*: (1) Is the punishment necessary? (2) Is it expiatory, retributive, or reparative? (3) Is it deterrent and reformatory? (4) Is it adequate and effective? Finally, *the end does not justify the means. A moral evil in itself cannot be employed to do good*. There is in reality no such thing as a good effect from an evil means or cause.

A medico-moral jurist insistently points out that the violation of the moral law is the source of all moral evil in the world, and much of the physical evil. The punishment of the criminal must, of course, be adequate and proportionate to his crime, and must not exceed his sentence. A man committed to prison for a term of months or years—*e.g.*, for theft—is not thereby sentenced to mutilation or death; and consequently it is absolutely necessary to exert every effort to preserve him from accident or disease while under incarceration. This principle is clearly obvious, although frequently overlooked, or partially, at least, neglected in practice. But it is equally clear that, as the soul transcends the body in importance, *the mind should likewise be protected from moral contagion and moral death.* Indeed, this obligation is correspondingly greater. If a man on discharge from prison is physically alive and well, but morally corrupt or dead, the carrying out of that man's judicial sentence has far exceeded its intention and even powers—exceeded it beyond anything that can be imagined. For the final destiny of man is not physical and temporal happiness, but spiritual and eternal. Even from the point of view of the State the results are absolutely unjustifiable and condemnable. By the public confession of judicial, prison, and police authorities our Indian jails are deliberate manufactories of immorality and criminality! As a matter of cold fact, the administration *concentrates on making jail labour pay*, and devotes no attention whatsoever to the moral regeneration of the unfortunate convict. Financial success and money profit from jail manufactures are held in the highest esteem, and appear to lead to promotion and honour for the officials concerned; the reformation and saving of the criminal—and necessarily of society—are entirely neglected, or perhaps frowned upon! *Economy* is thus elevated to the status of godship in the State pantheon! Can this be anything but shocking to contemplate?

Viewed in the light of such basic principles, although, of course, the sexes are isolated, the neglect of the classification and segregation of prisoners is nothing short of an outrage on humanity. Not only are the prevalent conditions conducive to mental contamination, but sexual depravity is encouraged to become rampant. Human nature under prison conditions, especially among aborigines, pagans, and the baser Muslim and other non-Christian denominations, and still more particularly among the criminal classes—notably recidivists—is prone to lust. Herding together at night in darkened wards, particularly in overcrowded jails, perhaps huddled together promiscuously on the floor, cannot possibly be conducive to morality. Until cellular segregation at night is urgently provided, the brighter lighting of wards and better supervision are essential. Earthquakes and fires teach us to provide for instant freedom in cellular confinement. So also is the segregation of classified prisoners into special wards and work-places in a separate part of the jail, or altogether in separate jails, an urgent matter. Overcrowding amounts at times to inhumanity.

The Jail Committee declared that the literary education of the convict is impracticable, except in the young. It would be interesting to know on what knowledge or experience this conclusion is founded (I have, of course, not read the Report). I strongly doubt its correctness, for much depends upon what is understood by "education." It is in those idle

hours after locking-up, which have been already noted in despair by the Committee, and which are most pregnant with the demoralization of the interneers, who have no other occupation to think about, that measures should be taken for the general mental education and moral uplift of the convict. Prison schoolmasters must, of course, be appointed, and the classes for instruction very carefully and tactfully regulated. The inception and future guidance of the scheme must, of course, be placed under experienced European educationists. As the work is dominantly moral, a mixed central Prison Educational Board should be constituted, to which, considering that the Jesuit teachers are universally regarded as the most efficient and successful educationists in the world, with all nations and races, they ought, with other denominations, to be specially represented. Punishment should be rarely resorted to ; for, if the studies be made interesting and gently graduated, and rewards adjusted according to capacity, the results would soon prove eminently satisfactory. In order to reach these untutored and neglected minds, every recreative means should be adopted that suggestive-psychology teaches. There is no superior means of imparting knowledge or rendering it impressive and, therefore, permanent, than through the eye. Hence diagrams, outline maps, models and figures, pictures—in short, all the lessons and suggestions of the kindergarten and museum—must be adopted. Simple explanatory lectures, or, rather, “talks,” and demonstrations should be given, plentifully interspersed with anecdotes and stories. The optical lantern and kinematograph are among the most potent teachers of mankind, and could be made to inculcate the most valuable lessons in geography, history, agriculture, industrialism, manufacture, travel, and “education” in its widest sense. And last, but not least, indelibly impress the elements of civic virtue, natural religion, and morality, and apportion marks and rewards for their practice.

Under such a judicious course, provided other sound methods recommended by the Committee supplement it, our prisons would become centres of enormous advantage to the country and the State ; and, where they now manufacture vicious and dangerous criminals, they would be model seminaries for the dissemination of culture, virtue, and morals. But this humanizing and civilizing department would need very capable and constant supervision by competent, ethically trained chiefs, preferably selected from the Educational Services.

Finally, on leaving jail, certificates of character and of capability in the trade or profession learned (which need not be dated from a prison) ought to be supplied each individual, which may prove useful for gaining him a livelihood, and prevent the police interfering. Parenthetically, it should be said that reorganization of jail labour needs attention, in order to be more in agreement with caste and class and enable the future earning of a livelihood. In certain cases he may be provided with the implements of his trade ; and the outside benevolent society should endeavour to post him, or set him up in a shop, and, of course, keep a friendly eye upon him to encourage and support him in right living. There should, moreover, be no objection to paying, on discharge from prison, a good percentage on the worth of his labour while therein, presented to him or the local society for his benefit, to help him to an honest livelihood.

INDIA'S WORKING CLASSES AND THEIR PROBLEMS

By K. C. RAY CHOWDHRY

(Late Labour Member, Bengal Legislative Council)

It is not generally known that India figured very prominently at the Fourth International Labour Conference held in Geneva last year. Her industrial importance was urged before and recognized by the Conference, and a seat was provided on the Governing Body of the International Labour Office. The strong claim of India as one of the leading industrial countries of the world has thus recently been fully recognized.

India is generally believed to be only a supplier of raw materials for manufacture abroad; our industries are described as hardly developed enough to make adequate use of our vast agricultural, mineral, and animal resources. A few facts and figures taken from official reports and Gazettes in this connection would be of interest and serve to dispose of this argument. Indian manufactures annually exported abroad are valued at £58,000,000. Indian railways have a larger mileage than those in England. Our jute industry is one of the largest in the East, comprising more than eighty factories capitalized at 15 crores of rupees, equivalent to £10,000,000 sterling. They produce nearly 700 million bags and 1,100 million yards of Hessian, valued at about 42 crores of rupees, equivalent to £28,000,000 sterling, and find employment for nearly 300,000 men, women, and children. The number of cotton mills, by far the largest industry in India, exceeds 270, and capital invested in them is more than 24 crores of rupees, equivalent to £16,000,000 sterling. More than 90 per cent. of the shareholders are Indian, more than

280,000 persons (including 50,000 women and 24,000 children) are employed in these mills, and they spin and weave about 700 million lbs. of cloth. The above are a few details concerning our two best industries.

Commercial agriculture or agricultural industry, or whatever you choose to call it, is of great importance to India. It employs something like 71,000,000 persons, including small-holders, farm servants, field labourers, and workers in the large organized industries, such as tea, coffee, indigo, and cinchona. Of these the tea industry is very important, from the Indian workers' point of view, as well as from the standpoint of the British, who have invested more than £12,000,000 in the jungles of Assam, the Terai, and the borders of Bengal and elsewhere, and depend for their profits more or less on British managing agents and managers, and on the well-being of the Indian labour force, which should be of much greater importance here than in any other organized industry in India. The tea industry employs nearly 700,000 persons, including a large number of women and children, about 15 per cent. more than the total number employed in jute and cotton. Labour problems connected with this great industry, which provides the principal beverage of the British nation, are much more urgent than many people realize. I shall only detain you for a few minutes, and give you a very concise account of the causes that led to strikes, riots, and disturbances, which occurred in 1921, and culminated in what is known as the Sensational Exodus of Garden Coolies in May, 1921, from Chargola Valley in the district of Sylhet, and the subsequent deadlock at Chandpur, the largest inland port in the new Province of Assam, and an important junction of the Assam-Bengal Railway, which meets here the river steamers. Nine thousand men out of a total garden population of 20,000, including dependents, left the gardens of that district in sheer disgust. Some of them were, no doubt, excited by political extremists belonging to the non-co-operation camp, but the outstanding

factor was that the distress among them, owing to the semi-starvation wages they received prior to the exodus, was so great that a conflagration at any moment was to be expected. I quote below an extract from the evidence given before the Assam Labour Enquiry Committee by Indian tea-garden owners and British planters. Mr. Dev, proprietor of Madhavchera Tea Estate, deposed: "There has been a widespread feeling of unrest among tea-garden labourers during the past few years. I attribute this to the increased cost of living, to the reduction in budgets since 1920, and to the general desire for improved conditions. Coolies prefer Indian gardens to European gardens. They declare that they are better treated in Indian gardens." Another Indian, the Secretary of several Indian tea-garden companies in Sylhet, says (page 28 of the Evidence before the Assam Labour Enquiry Committee): "The rates for adults vary on different gardens. The monthly rates in Sylhet gardens for a Hazira (attendance) consisting of twenty-seven working days are Rs. 6, Rs. 5, and Rs. 3 (equivalent to 8s., 6s., and 4s.). In Assam they are Rs. 8 (equivalent to 10s. 8d.), Rs. 6 (equivalent to 8s.), and Rs. 4 (equivalent to 5s. 4d.) a month." A European manager of a tea estate says: "I am not aware of a widespread feeling of unrest among my tea-garden labourers. Any possible grievance that they may have has been due to high prices." Another European manager says: "I consider Rs. 7 and 8 (equivalent to 10s.), Rs. 6-8-0 (equivalent to 8s. 8d.), working on the garden, a decent monthly wage."

I refrain from describing these wages as adequate or inadequate in view of the standard of living of tea-garden labour, and leave you to judge for yourselves. I said before that 9,000 tea-garden employees and their dependents, partly excited by political agitators and partly disgusted with their lot in the garden, sold their precious all—cattle and pots—and made their march towards Chandpur on their way home in the Central and United

Provinces. They arrived in a forlorn and famished condition, due partly to their tramp of 100 miles and partly to a long period of malnutrition. I shall not trouble you with the details of what happened then. A number of them were allowed to embark on steamers, but the rest were more or less prohibited under Government orders, probably at the instigation of the planters, who feared a panic and a general exodus from the whole Province. There was a deadlock and congestion of thousands of refugees, followed by an outbreak of cholera and the cruelty of the Gurkha soldiers who were sent to drive them out of the railway yard in anticipation of their rushing the river steamers. I do not for a moment suggest that both the Government and the tea planters were totally indifferent to the terrible suffering of thousands of Indian workmen, but I feel bound to confess that the system which planters followed in India—viz., curtailment of wages budget during the lean years or depression of the tea trade, which lasted for two or three years after the Armistice, is, to say the least of it, opposed to the principles of humanity and justice. That is why I advocated in the Bengal Council legislation of a Trade Board Act, to fix minimum wages for each industry after careful investigation of conditions. In this connection I shall not be doing justice to the tea planters if I omit to mention that as compensation for very low wages or to supplement them they make certain concessions—viz., free housing, medical attendance, cheap rice and clothing, grants of land for cultivation, which in money value is worth about Rs. 1 per month to each worker. I have occasionally discussed matters with the workers, who are generally drawn from the very backward classes (Sonthals, Bhils, Gurkhas, and similar semi-aboriginal communities), and observed that the recent political agitation in the country has made them conscious of their rights to live better lives and to expect better treatment from masters.

Coming back to the subject of India's industrial import-

ance, marine transport finds employment for 141,000 Lascars ; whereas Japan, Germany, Italy, and France employ 137,000, 84,000, 60,000, and 44,000 marine workers respectively. The subject of Lascars is very dear to me. It was some twelve years ago that I helped to found an institute or club for them in Victoria Docks with the assistance of my lamented friend, the late Hon. Secretary of this Association, Dr. John Pollen, Lord Lamington, and others, who contributed to our funds. On my return home I continued my interest in the welfare of the Lascars. The great services of the Lascars have been eulogized by Lord Amphill, who describes them as "the dusky sailors of the Empire."

In spite of low wages compared with those paid to British seamen, there is at the present time hardly any discontent about remuneration, as they realize that there is a great depression in the Indian shipping trade, and consequent unemployment. They are, however, dissatisfied with the method adopted by Government for recruiting. They are employed through a peculiar agency known as the Licensed Brokers under the old Merchant Shipping Act of 1859. The present practice in Calcutta is that a Serang (supervisor) pays a lump sum—say 200 rupees—to the licensed broker, who provides him with a ship, and the Serang, who finds the crew, in his turn makes the Lascar pay nearly double that amount. Their only chance of employment at the present time is to grease the palm of the Serang and make a gift of at least one month's pay to him. This recruiting scandal was the subject of an official enquiry by an expert committee, before whom I gave evidence. The Government is considering the advisability of amending the Act and starting an official recruiting agency. It was in May, 1922, that charges of cowardice and panic against the Lascars and Indian stewards of the ill-fated *Egypt* were made in some cases by interested parties, only to be contradicted by official statements. I happened to be at Simla at that time in connection with

the drafting of the Workmen's Compensation Bill, and had to make a firm stand against the Secretary of the Marine Workers' Union in London, who denounced the employment of Lascars and demanded the substitution of white sailors on British ships, simply because one or two Goanese stewards behaved, perhaps, badly at the time of the sinking of the vessel. The Calcutta partner of Messrs. Mackinnon, Mackenzie and Co., the shipping agents, wrote : " During the War the British India Company lost twenty-one vessels by enemy action, the P. and O. seventeen, manned by Calcutta and Bombay crews, and in every case the conduct of the Indian seamen was worthy of the best traditions of the service. These companies during the war were never in difficulties to man their ships." Many commanders told me that they preferred Indian seamen to British, because the former are temperate, their nerves cool, and their discipline satisfactory. I was gratified to learn that some of these Lascars have recently been awarded the Medal of the Royal Humane Society for conspicuous bravery at sea.

I now pass on to workers in other industries—mining and transport—which employ more than 20 million Indians, whereas the number employed in similar work in Italy are 4·9 millions ; in Belgium, 1·7 ; in Japan, 2 millions, and in Switzerland, less than 1 million ; or, in other words, India employs twice as many workers as those of the four countries put together. Of these 20 millions only 1 million are employed in jute, cotton, engineering, arms and ammunition, printing, tannery, iron and steel, sugar, oil, paper, and other industries coming under the Indian Factories Act. Railways alone employ 654,000 persons, as many as in Great Britain and Ireland ; river and road, telegraph and telephone services employ 1 million Indians and Anglo-Indians. Indian collieries produce 21 millions of metric tons of coal and lignite, against Belgium's production of 22 $\frac{3}{4}$ millions, and Japan's 28 millions. One hundred and ninety-one thousand Indian coal-miners are employed in

Bengal, Behar, and elsewhere. Coal, as in other countries, is practically a key industry in India on which depend all other industries using power, and yet mining labour in India presents most peculiar problems of its own. An Indian miner, according to official reports, works on an average 118·8 tons of coal per year, whereas a Japanese miner raises only 96 tons, and a Belgian, noted for his mining skill, does 130 tons a year, and a British miner raises something like 196 tons a year. These figures should give you some idea of the efficiency of the Indian miner as far as his working days are concerned. An Indian miner's wages are unfortunately very low, taking piecework as the basis of remuneration. He is paid about one rupee per ton, calculated on 10 annas or 10d. per tub of coal cut and raised above ground. A Belgian is paid at least eight times, a Japanese five times, and a British miner more than fifteen times as much. It is a notorious fact in the coal industry that a Sonthal or a Bawree miner and his wife work rather leisurely to earn just enough pay for their scanty food and clothes, and their favourite intoxicant, Pachwai, a kind of spirit made from rice. The drink evil is playing havoc with the energy of one of the best sections of our industrial workers in India, namely, coal-miners, and is not infrequently encouraged by the mine owners, who allege that drink is an incentive to work harder and earn more money. The depravity and economic subjection of the coal-workers are without a parallel in any other industries in British India, and a good deal of their degradation is due to the indifference of the Indian and European industrialists. It is not merely the low wages paid to the miners, nor their bad housing, but callousness on the part of a large section of coal owners regarding the welfare of our coal-miners, that brought about the sad state of affairs in the coalfields. Can any of you imagine a greater depravity of human mind than the refusal of the present-day coal-miner to work more than three days a week when he knows quite well that he will earn twice as much if he worked the full week

of six days? This refusal is attributed by coal-owners to laziness, to the recent increase in wages, which, including the increase, amounts to about 1s. 4d. per ton, sanctioned by their merciful masters, and to consequent affluence, and also to the activities of agitators in the coal-fields. I venture to say, after personal investigation, that the real causes are to be sought elsewhere. In the first place, the peculiar nature of underground work, specially in a tropical country like India—viz., absence of light and ventilation, dampness, the inhalation of noxious fumes coming from the kerosene of the miner's lamp, the heavier atmospheric pressure in the mines—all these tell on the health and mind of Indian miners of both sexes much more than on those of the underground workers in non-tropical countries. Secondly, the absence of a good home, due to the employment of the wives underground, tends to create a craving for relaxation by drink, in fact any stimulant which will make them forget their miseries. This is why we hear so much of miners' drunkenness in the coal-fields of Bengal and Behar. Drunkenness in most cases destroys the appetite of the miner, so that he eats insufficiently when under the influence of drink. Consequently he is weakened and depressed, and his energy is sapped after two or three days' work. In my opinion, drinking, employment of wives underground, and malnutrition, together with poor housing and insanitation, account for this sad state of affairs in the coal-fields, namely, depravity and deterioration of mining labour through sheer indifference to the human aspect of the question.

In reply to my question in the Bengal Legislative Council regarding the extent of liquor consumption in the coal-fields, the Hon. Minister in charge of Excise said: "The total number of licences for sale of country spirit and Pachwai in the Sub-Division of Asansol (the largest mining centre in Bengal) were as follows; 26 country spirit shops and 120 Pachwai shops—which represented a value of Rs. 33, 64, 03 in the case of country shops, and

Rs. 12, 17, 611 for Pachwai." The population of miners under the Asansol Mines Board of Health is given as 48,642. Assuming that about 90 per cent. of the total value of liquor is consumed by actual miners, a miner spends nearly Rs. 30 a year on his drink, or Rs. 2 annas 8 a month. His wages, according to Mr. J. H. Pattinson, the late President of the Indian Mining Association, are Rs. $1\frac{1}{2}$ per day for himself and his wife, who helps him as a carrier. This works out at 12 annas per head per day; he works at present about sixteen days a month, and therefore receives Rs. 12 a month. This is more or less a theoretical calculation, but in practice a miner's drink bill, owing to the recently increased price of country liquor, is between two and three annas a day, which is practically half of the mighty wages he receives. Regarding housing, I have found in Ranigunge as many as six persons living in a single room of 8 by 14 feet, including husband and wife and grown-up boys and girls, where the entrance door is the only opening. Besides, there are present all the other elements of bad sanitation, such as very bad drinking water, especially in summer and even during the monsoon, which is often the cause of terrible epidemics.

The vital statistics in 1919, according to the Chief Inspector's report, show that "there were 3,511 cases of cholera and 1,863 deaths in 1919 within the jurisdiction of Asansol Mines Board of Health, and influenza cost the lives of 2,024 in the same area." Regarding under-nourishment, the usual diet of the miners is boiled rice and scanty vegetables, and such boiled pulses as can be procured locally, which, however, are of the coarsest kind. To these may be added salt and frequent drinks of the water in which the rice has been boiled. Milk or fish, meat or ghee (clarified butter), or any of the nitrogenous edibles are luxuries almost unknown to them, and no wonder they cannot exert themselves for more than thirty hours a week. Their diet, only suitable to agricultural work, does not provide by any means the beef-steak stamina of a British

miner, and no wonder they are only too eager to go back to their agricultural occupation more often than the coal-owners desire. In reply to a letter, Dr. G. W. Thompson, the Chief Medical Officer of Health of the Jharlia Mines Board of Health, wrote to me: "Everything you mention applies equally to the Jharlia field. . . . The subject of drunkenness has been prominently before me for many years, and I prepared a full report dealing with the subject for the Government, but without any effect, probably due to consideration of loss of revenue. The problem here is infinitely worse than that in Asansol, and even then I advocated total prohibition as much superior, despite any difficulty in the way, to existing conditions. Housing is another matter with respect to which I have been working continuously. Strange to say, the opinion of Government was to the effect that the original Bengal Settlement Act does not provide for dealing with housing on collieries. You desire my opinion as to why the miners are unwilling to work more than three or four days a week. The chief reason is that by working three or four days a week he finds he can earn as much money as is necessary to keep him for the whole week, and leave him sufficient for the limited forms of enjoyment he has, the chief of which is undoubtedly getting drunk. One of the principal reforms necessary, in my opinion, is the gradual prohibition of the employment of women on collieries. The man, when he finishes his work and comes to the surface tired and hungry, finds no comfort in his own home and no meals provided for him. The natural result is that he goes to the nearest spirit shop to have a drink. He takes this on an empty stomach, and being tired and disinclined for exertion, is apt to remain there drinking instead of going home to eat his food."

The above is the deliberate opinion of the Health Officer of the Mines Board, who has been working in the district for a good many years.

The question is, "What is the solution?" I do not

claim to be the purveyor of a patent remedy—the cure-all of the coalfield calamity. Some suggest that the low standard of living must be raised. This is a great problem to be dealt with by philanthropists or missionaries, who, by the way, have done excellent work in connection with Sonthal Missions. The traffic in the devastating drink must be abolished. Dairies should be started in the leading centres of the mining settlement to provide cheap and fresh milk in the place of alcohol. Drastic measures should be taken to replace the wretched hovels by clean cottages or quarters, as the East India Railway Company provides in Giridih coalfields. Provision should be made for the abundant supply of fresh foodstuffs, including vegetables, eggs, fish, and similar nitrogenous edibles. Naturally, all these improvements involve an expenditure of money, and the question is, how are the funds for these to be raised without injuring the coal trade and excise revenue? I suggested last year a levy of four annas per ton at a time when the coal trade was prosperous and large profits were being made, and when the difference between the cost of coal, inclusive of all charges, and selling prices was on the average Rs. 5 per ton for both first-class and second-class coal. The Chief Inspector's Report showed that 68 lacs of tons were raised in the Ranigunge area and 121 lacs of tons in the Jharlia area. A four-anna levy would produce nearly 76 lacs of rupees, more than sufficient to compensate for loss of excise revenue and preserve 191,000 miners from extinction. There is a slump in the coal trade now, but that is sure to pass. The worst slump can easily bear a small levy of 4d. a ton.

I have so far dwelt on the conditions of the working classes engaged as Lascars, and on the tea plantations and mining, and I now pass on to the more intelligent class of labour employed on railways and other industries.

The sensational strike on the East India Railway in February of last year, which paralysed the main arteries of trade in the whole of Northern India for more than two

months, affected seven or eight thousand railwaymen, reduced Government railway revenue by over fifty lacs of rupees, and resulted in loss of wages to the extent of nearly forty lacs of rupees. The dispute originated at Tundla locomotive shops in the District of Agra as the result of an assault on an Indian fireman by an Anglo-Indian shunter. I took all possible steps to bring pressure on the leaders to come to an agreement, but was greatly hampered by foolish agitators who had no practical knowledge of the cause they were espousing. I do not deny for a moment that political agitation and the excitement of racial feeling were partially responsible for the prolongation of this unprecedented strike, described by many as an industrial insurrection. As in the case of the exodus of the tea-garden coolies, the accumulated grievances of many years of the railwaymen were the powder magazine which it only required a spark in Tundla to explode. The strike brought into prominence the strong resentment felt by Indian employees against the differential treatment meted out to them by Europeans and Anglo-Indians. The editor of a leading Calcutta newspaper remarked: "As long as Anglo-Indians are given exceptional treatment, as long as posts are reserved for them, so long as their European superiors foster baneful ideas of their race superiority over the 'native,' just so long will that genuine feeling of resentment continue which has rightly or wrongly crystallized over the assault on the fireman Nandlall." These remarks are partially true, and supported by facts and figures which came to light during the investigation of the unfortunate strike, causing unspeakable miseries to thousands of our best workmen and great losses amounting to crores of rupees to coal-owners, industrialists, and merchants. The strike revealed in no uncertain way that a new situation had arisen. If I may quote the words I used in the Legislative Council: "There is a new consciousness of self-respect, a new spirit of comradeship in evidence among the Indian workers of to-day. This spirit, which did not exist before in the same degree,

is responsible for the resentment of and even retaliation against ill-treatment, abuse, or assault. It is this spirit which is at the bottom of the railway strike." I do not wish to dilate more on this subject of the conditions under which the employees of the East India Railway worked. The Government has at last decided to take over management, and I have no doubt racial distinction will soon be a matter of the past. While on the subject of railway workers I should like to mention the miserable condition under which the porters known as licensed coolies work at large stations like Howrah in Calcutta. These licensed coolies are recruited through a contractor appointed by the Railway Company. This individual (an ex-stationmaster) charges not only an admission fee or a licence fee, but realizes Rs. 7 per month from each porter, who hardly earns Rs. 20 a month, for supervising their work. After paying overseers he makes a profit of nearly £200 a month. I was induced by the porters to form a Union, over which I presided. I convened several protest meetings, took the matter up with the railway authorities, begged them to reduce the fee even by Rs. 2, had questions asked in the Legislative Assembly at Delhi, and used every legitimate means to remove this grievance, but without success. This is only one of many typical cases in India where recruiters, supervisors, and agents on the railways, in the docks, in the shipping offices, and the mills, are encouraged to make huge profits without let or hindrance at the expense of the poor workers. This is absolutely contrary to the International Labour Convention as passed in Genoa a few years ago. This question of middlemen and supervisors getting the better of ignorant and helpless labour is very serious in the jute and cotton mills of Bengal. The Indian overseers and Sirdars, the natural leaders of labour, are in many cases opposed to Trade Union organization which affects their pocket and power.

Space does not permit of a description, however cursory, of the conditions under which the workers live in other

industries. There is for example the position of the jute mill employees, whose numerical strength is about 300,000. They work in Calcutta and the neighbourhood, the majority not being Bengalees at all ; they are Muslims and Hindus from up-country and Orissa, more eager to return home than to work as permanent operatives. Sanitation and housing, except in one or two congested areas, are well looked after by the management as well as by the mill municipalities. They worked to their utmost capacity during the War and subsequent years, and made great fortunes for their shareholders. They are paid a small bonus which would have been quadrupled if they had any organization at all. It is a curious factor peculiar to jute mills that the mill hands are obliged to work a complicated system of shifts of three, four, or five hours, instead of six continuous hours. "The present complicated system of shifts," according to an official report, "permits of no home life and is not conducive to health, and education laws, if introduced, would for that reason have little success under the present system. The poverty of parents and the dishonesty of Sirdars lead in many cases to the employment of children and other abuses." The employers seem to maintain this system as being profitable to them, at the expense of labour of course, and especially of the children, who are cruelly exploited by the Sirdars and timekeepers through whom they get employment. Another unfortunate factor in the working of jute mills from the point of view of labour is that they are only open four days a week in order to keep down production and keep prices up, to the detriment of workers, who get little or nothing for two days of enforced idleness. This state of affairs was the subject of a protest at a conference of jute mill hands at Kankinarah, over which I presided.

I have given you only a sketch of the problems of a few types of the working classes in India. These problems are economic, involving wage and living conditions ; social, embracing politics and education ; moral, involving self-

respect and self-consciousness. In my opinion the greatest of all problems is that of education and training of the workers. Economic betterment, as well as their moral and intellectual development, would go far towards the solution of the problem. Primary education seems to me to be the only means by which the workers can express themselves, exercise their brains, acquire self-respect, and attain skill in their calling. The late Mr. Gokhale moved in the Legislative Council that all factories employing not less than twenty children should provide free education for the employees. The motion was lost, as the employers refused to be saddled with the burden which belongs to the State. Attention has already been drawn to this by Mr. P. Padmanabha Pillai in his suggestive Paper read before this Association early this year. However, Bombay has taken a lead in the matter, empowering municipalities (other than that of the City of Bombay) to provide compulsory education subject to certain safeguards. I hope that other industrial Provinces will follow the great lead and provide free primary education for workers' children in mill areas, mines, and plantations.

A word or two more about the Indian labour movement and I have done. Public opinion about Labour hardly existed in India when Government undertook the Factories legislation, which has, since 1875, when the first Act was enforced, been amended and brought up to date in conformity with the International Labour Convention. The last Act, known as The Factories Amendment Act, 1922, provides satisfactory protection of woman and child labour and regulates working hours, rest, and holidays, as well as the safety and health of the workers. In addition to this we have an up-to-date Workmen's Compensation Act and a Mines Act which foreshadows gradual prohibition of underground female labour. The Industries and Labour Department at Simla, now under the charge of an Indian member of vast experience who enjoys the confidence of the Indian public, is, I understand, going to draft a Bill to

deal with registration of Indian Trade Unions. This will encourage genuine organizations and eliminate the rest.

There was philanthropic agitation by public men in India against indentured labour in Indian tea gardens in Natal, Transvaal, and elsewhere. This movement arose partly from national self-respect. The next movement was organization of literate employees in the telegraph and railway services for collective bargaining, under the leadership of Europeans who belonged to those services. Great credit is due to Mr. H. Barton, the organizer of the Indian Telegraph Association, embracing almost all the Anglo-Indian workers in that service, by far the best union of its kind. A Seamen's Union was organized in Bombay some years ago to protect the rights of seamen employed in the Indian mercantile marine. A more important work was, however, begun in Ahmedabad in 1920, at the instance of Mr. Gandhi, who, with the help of a sister of a leading local mill-owner, organized spinners and weavers' Unions. They are going as strong as ever to-day. As for Unions in Bengal, Behar, Madras, and the United Provinces, they are more or less in the infant stages of development, and under the control of outside friends and sympathisers who have more enthusiasm than practical experience of labour organization. The working classes must develop their own organization if they are to play any part in the Dominion system of government foreshadowed in the Montagu-Chelmsford reforms.

The rise of the Indian worker, the awakening of the peasant, is a factor to be reckoned with. It can no longer be ignored. We find all kinds of people busy organizing labour. Amongst this bumper corps of our labour leaders are to be found humanitarians, social and religious reformers, barristers, clerks, Government agents, politicians, and even labour aristocrats and what-nots.

It is a sheer illusion to think that these self-appointed leaders care any more for the interests of the labour masses than does the Congress. It is because of their extreme economic and intellectual backwardness that the Indian

working classes are not in a position to throw up their class leadership. But the movement is there, threatening the placid satisfaction of the capitalists and landlords—Indian and European. Our improvised labour leaders are but the gallant defenders, conscious or unconscious, of the propertied classes, under whose baneful leadership labour organization in India will be used as pawns in the so-called political games in which they have no direct or immediate interest. They have been fooled in the past and dragged into hartals and strikes which may have brought glory to the promoters but no tangible gain to themselves.

DISCUSSION ON THE FOREGOING PAPER

A MEETING of the East India Association was held on Monday, November 19, 1923, at the Caxton Hall, Westminster, London, S.W. 1, at which a paper was read by K. C. Ray Chowdhry, Esq., entitled, "India's Working Classes and their Problems." Sir Valentine Chirol occupied the chair in the absence of the Earl of Winterton, M.P. (Under-Secretary of State for India).

The following ladies and gentlemen, amongst others, were present: Sir Michael O'Dwyer, G.C.I.E., K.C.S.I., Sir John G. Cumming, K.C.I.E., C.S.I., Sir Patrick Fagan, K.C.I.E., C.S.I., Sir William Ovens Clark, Sir Lionel Jacob, K.C.S.I., Sir Duncan J. Macpherson, C.I.E., Sir Alfred Chatterton, C.I.E., Mr. D. M. Dalal, C.I.E. (High Commissioner for India), Mr. F. H. Brown, C.I.E., Lieut.-Colonel P. W. O'Gorman, C.M.G., M.D., M.R.C.P., D.P.H., I.M.S. (retired), Mr. J. P. Bedford, Colonel M. J. Meade, C.I.E., and Mrs. Meade, Colonel A. S. Roberts, Mr. O. Lloyd Evans, Miss Scatcherd, Mr. John Nicholson, Mr. M. A. J. Noble, Mr. R. Rustamji, Mr. M. Aye, Miss Nina Corner, Mr. F. C. Channing, Mr. E. C. Emerson, Mr. F. Grubb, Mrs. Drury, Mrs. and Miss Wilmot Corfield, Mr. J. Decekal, Colonel F. S. Terry, Mr. Charles P. Caspersz, Mr. R. M. J. Knaster, Professor and Mrs. Bickerton, Lieut.-Colonel L. C. Swifte, Mr. E. Worthington, Major G. W. Gilbertson, Dr. Lawrence G. Fink, Rev. Dr. Weithrecht Stanton, Mr. A. R. Nayyar, Rev. O. Younghusband, Mr. S. N. Saklatvala, Mr. C. B. Vakil, Mr. P. Padmanabha Pillai, Mr. F. J. P. Richter, Mr. P. Weston Edwards, Mr. J. Sladen, and Mr. Stanley Rice, Hon. Secretary.

The CHAIRMAN called on the Lecturer to read his paper.

The paper was then read.

The CHAIRMAN: After that very interesting paper I hope someone present will favour us with any observations they may have to offer on the subject. I do not know whether the High Commissioner has anything he wishes to say on the subject.

Mr. SAKLATVALA said he appreciated the special mark of attention in being requested to say a few words on such a problem, but he was very much afraid that he viewed the Labour problem from quite a different angle from that from which the lecturer had viewed it. He had just looked at two or three words in the lecture which appeared to be the stepping-stones on which the lecturer's very excellent and laboriously got up paper had worked. He had spoken, for instance, in one part of his paper of the tremendous efforts which he described as having been carried forward in a legitimate direction, and then he pointed out the result of the methods which had been employed, but he did not discuss what were legitimate or illegitimate methods. Who was to be the final judge that only certain methods were legitimate and the others were not? It was sometimes arguable from the opponents' point of view in every struggle that methods which ended in failure were the only legitimate methods,

and the methods which were likely to succeed were run down as illegitimate methods. Then there was another point which struck him, where the lecturer defined the attitude of the present Minister in regard to promoting education, which was suggested as a means of driving away ignorance, but with certain safeguards. That was a point which puzzled him, and it was a point on which many mentalities worked in regard to methods for expelling darkness and ignorance, subject to certain safeguards. He did not know what those safeguards were. The third stepping-stone on which the lecturer finally stood was that the methods and conditions of the working classes in India must be so improved that in course of time they would be able to take their place in the great Dominion rule intended by, or planned out in, the Montagu-Chelmsford Report.

THE CHAIRMAN: I must ask the speaker to keep to the question of India's working classes and their problems, which is what we are dealing with. The Montagu-Chelmsford Report hardly comes within our purview.

MR. SAKLATVALA said that, from his point of view, there was nothing in the report, in spite of the imaginary hopes of his Indian friends, in regard to which the workers of India, China, or any country in the world could ever have any legitimate place. From the lecturer he understood that the lecturer had done very great work amongst the workers in India so far as he had seen their conditions, but what would appeal to his British friends was no doubt the great reflex upon the home production, as well as upon labour conditions here, of their own activities in India along the lines of labour as it was now run, and as it was described by the lecturer. If that was once appreciated, and if that was once visualized in the aspect of an inseparable labour unity in those industries in the Empire where production by human energy was essential, he thought his British friends would at once wake up to the idea that, to prevent further destruction of the Labour standard in England, to expand the production both in India and in England, one thing that was essential was the complete wiping-out of those conditions of labour existing in India, as described by the lecturer. It looked rather a bold step to approximate the conditions in all parts of the Empire wherever the same production was produced on the basis of equal outputs. But ultimately that was the only solution that was going to solve all difficulties, economic and political, both in India and in Great Britain.

In conclusion, he would say that the greatest enemy to the realization of that object was neither the British worker, nor the Indian worker, nor the political agitator, but the nervousness of the Indian merchant and manufacturer, that if labour in India was to live under better conditions and on the same standard of life as Western labour, the whole Indian industries would have to be closed down. In his opinion the Indian industries would always go at a slow pace as long as labour was kept on such a low level, and the only chance for equilibrium to be established was that there should be identical conditions, political and economic, for the labour of all countries in the world. (Hear, hear.)

MR. FREDERICK GRUBB said that Mr. Saklatvala had made a most interesting and eloquent speech, as he always did, but he had not discussed the problems which were dealt with in the paper which had been read. In

the course of his address the lecturer said the question of raising the standard of living of the working classes in India was a matter for the consideration of missionaries and philanthropists. He thought a good many more people would have to consider the problem, in addition to missionaries and philanthropists, although everybody would welcome their co-operation in connection with the remedies which were required. They had listened with great pleasure to the lecture, for surely Mr. Chowdhry had revealed a condition of things which must cause them all seriously to think, especially those of them who had an interest in the industrial concerns of India. They ought carefully to consider the state of affairs which Mr. Chowdhry had revealed in his paper. The lecturer did not come as a theorist; there was very little theory in his lecture, although personally he did not quite enter into the spirit of the peroration at the end of it, but, at any rate, Mr. Chowdhry had himself seen and experienced the conditions which he described, and those conditions surely could not be much worse. He did not pretend to be an authority on economic problems. The question which interested him particularly was the question of one of the principal causes of the degradation to which he referred, namely, the drink problem. It was not, perhaps, the main issue before them, but it was one of the principal obstacles to the emancipation of the Indian workers. The lecturer's experience had been very largely limited to Bengal and Behar, but he would like to impress upon the meeting the fact that, in regard to the liquor traffic, the views he had given expression to were shared by all the representative employers, labour organizations, and social workers in the various provinces of India. He did not wish to go into those points in any detail, but there had been a recent inquiry in Bombay into the condition of the working classes, and a scientific examination of a large number of working-class budgets was undertaken under the authority of the Labour Office of the Bombay Government, and it had been found that from 8 to 10 per cent. of the income of the mill-hands went in liquor. Another inquiry had been made in the city of Poona, which resulted in very much the same conclusions. The housing conditions and the drink traffic reacted upon one another. It was often debated whether poverty led to drink, or drink led to poverty. In his opinion they were intertwined one with another.

It was not so much a question of turning the worker into a better profit-making machine; he believed it would be in the interests of the worker himself to get rid of that particular evil.

Speaking of the conditions of the tea estates in Assam, they had been told that the proximity of the liquor shops to the tea estates had resulted in considerable degradation of the workers. The Indian Industrial and Commercial Conference held in Bombay two years ago had passed a resolution to the effect that in view of the great benefits to trade and industry which had already been secured by the United States of America through their prohibition of liquor, and in view of the fact that the efficiency of labour in India had suffered through the liquor traffic, the Government should at once take up the question of the import and sale of liquor for intoxicating purposes. Even the labourers themselves

had come to the same conclusion. They had started Trades Unions, and at their first Congress held in Bombay they had emphasized the desirability of prohibiting the opening of drink shops in the vicinity of mills and factories.

In conclusion, he thought he had said enough to prove his point that employers, employed, and social reformers, all, indeed, who had actual personal experience of the conditions amongst the workers in India, had come to the conclusion that one of the most serious obstacles to progress in India was the continuance of the liquor traffic as it at present existed.

Sir PATRICK FAGAN said at that very late hour he would confine himself to a very few remarks. Some of the statements made in the paper contained undoubtedly very serious allegations against employers, and, before coming to any definite decision, he felt he would like to hear the other side. There was, however, one remark which he would like to make with regard to wages, and that was, that in considering the standard of industrial wages in India, and its apparent lowness, one had to remember that in the great majority of cases industrial wages did not by any means represent the whole annual earnings of the labourers. Most Indian labour was migratory, and came from the agricultural classes. When the season of agricultural work was in progress the labourers worked in their fields, but at other seasons they resorted to the factories, so that the earnings made there did not by any means represent their total income. That was a fact which should be carefully borne in mind in estimating the weight of the statements contained in the paper.

The only other point to which he wished to draw attention was that India was a very big place. In the figures which had been given that scarcely seemed to have been borne in mind. Those figures must be considered against the background of the fact that India itself was a sub-Continent and peopled by nearly one-fifth of the population of the world. Comparisons had been made between the statistics of India and those of certain European countries. One had to bear in mind, however, that India could contain some twenty Englands, and that its population was over 300 millions, and that only 12 per cent. of that population was engaged in industry other than agriculture, which was far and away the most important occupation of India. The results yielded by the mere total figures of Indian industry were exaggerated and distorted out of proportion unless they were considered very carefully against the background resulting from the fact of the immense area of India and its population.

The LECTURER in reply said: Ladies and Gentlemen—I thank you for the patience with which you have heard me read my paper, and the only observation I want to make is this. Mr. Saklatvala was kind enough to point out what I had said regarding legitimacy, and who was the final master. Well, I think he will realize the limitations under which I worked, and will also realize the utter helplessness of the workers, who have no combination, and who cannot continue to strike on an empty stomach, and I challenge any British Trade Unionists to continue a strike without drawing Trade Union rate of pay, as the Indian workers have had to do.

With regard to making labour more important, and all that kind of thing,

that, of course, savours of a political aspect, which is undoubtedly a very great factor, but I do not wish to enlarge upon the political aspect of the labour question in India at this meeting.

I am obliged to Mr. Grubb for his speech on the drink evils, which play such great havoc in India, and I am very glad that he has given those figures so as to make people realize the importance of this question.

Sir Patrick Fagan referred to the figures I gave as to the industrial wages, and he pointed out that those were not the only wages that were earned by Indians; but no doubt he realizes that there are thousands of workers who have left their homes and gone to places like Bombay and Calcutta and other industrial areas who have nothing else to follow. The wages which I quoted do not apply to half agricultural and half industrial workers, but to actual industrial workers. Then he said that the figures I quoted were nothing compared with the vast population, but I think I mentioned that we took into account 71,000,000 agricultural workers, and then we must take also the available labour supply. Out of 300,000,000 you cannot get 250,000,000 to work. The utmost you can get is 20 to 25 per cent. of the population of the nation which are available for labour. This question of population is often placed before us, but that has really no bearing on the economic aspect of my paper at all. We know that the agricultural worker becomes eventually an industrial worker. Even in England you may have read about the railwaymen's grievances, and, as has been pointed out, a large number of these people are agricultural people. That does not in any way affect the question of wages.

I thank you, ladies and gentlemen, for your patience, and I hope that before I leave England I may be able to place before you the political aspect of the question. (Hear, hear, and applause.)

Mr. D. M. DALAL said he had much pleasure in proposing a cordial vote of thanks to the Chairman for occupying the chair that evening.

The CHAIRMAN: I will only just say that I think we are all very much indebted to Mr. Chowdhry for his paper, though some of it is not pleasant to hear; but I think, taking it altogether, the moderation with which he has pleaded the cause of labour in India can compare very advantageously with the language which is very often heard here by people who profess to be leaders of labour in this country; and with regard to the relative proportion of industrial and other population in India, the thing that we have to bear in mind, it seems to me, is that, though it may be only 12 per cent. of the population who are industrialists, the growth of that population is one of the most striking phenomena in the history of India, and one which we have to reckon with, but we must be very thankful to those gentlemen who are prepared to come here from India and to talk to us as frankly as Mr. Chowdhry has done this evening.

The proceedings then terminated.

Mr. PADMANABHA PILLAI, B.A., B.L., PH.D., F.R.HIST.S., writes :

I had intended to speak a few words on Mr. Chowdhry's paper, had time permitted. For though I am in general agreement with Mr. Chowdhry's views, I was rather sorry that considerations of time and space

compelled him to omit all reference to the workers in what, after all, is India's principal industry—agriculture. Organized industries in India, it is always necessary to remember, still employ only considerably less than one-two hundred and fiftieth of the entire population; and it is likely to be believed that the unfavourable conditions of work and of wages under which the factory operative or the miner labours are things peculiar to themselves, and do not affect the agricultural population. Such a belief is not always true; for the conditions of life of the *Halis* of the Bombay Presidency, the *Padials* of Madras and the *Pulayas* of the Malayalam areas are in many respects no whit better. In his recent Census Report of Bombay, Mr. Sedgwick calls the *Halis* freemen *de jure*, but slaves *de facto*. Agrestic serfdom is by no means yet dead in India; and recent settlement operations in the Chota Nagpur area have shown how persistently this remnant of the mediæval social system still lingers in the land.

The inadequacy of agricultural wages is a historical corollary, in my judgment, of this system of prædial slavery. Real wages among agricultural workers had risen from 103 in 1895 to 138 in 1912, and in recent times a labourer earns as much as a rupee a day in some areas, such as in Sind and the North-West Frontier Province. The latest Madras Census Report says that agricultural wages in that Presidency are still hopelessly low: five to eight annas a day for a man, and three to four annas for a woman. This, of course, explains the steady stream of emigration from Madras to the Federated Malay States, Ceylon, and Burma. If this exodus is not checked in time Madras will soon experience a shortage in agricultural labour.

It is all very well to advocate higher wages and a higher standard of living for the worker, but it is only under certain conditions that these operate beneficially. Mr. Chowdhry may be right in arguing that the cause of the miner's unwillingness to work is not the recent increase in wages; but take the analogous case of agriculture. Agricultural prices have been rising steadily for the last half-century, and their results on the landowner are the same as the effect of a rise of wages for the worker. In either case, the increased income has been used in enjoying increased leisure. Thus, in Madras, out of every 1,000 principals, non-cultivating landowners have increased from nineteen in 1901 to forty-nine in 1921, and non-cultivating tenants from one to twenty-eight. In the same period cultivating landowners have declined from 484 to 381, and agricultural labourers from 345 to 317. The withdrawal from useful labour of such a rapidly-increasing class is surely a matter that needs serious attention.

Lieut.-Colonel P. W. O'GORMAN, C.M.G., M.D., M.R.C.P., D.P.H., I.M.S. (retd.), writes:

Mr. Ray Chowdhry is to be congratulated on his perspicacious and temperately expressed paper on the Indian Labour problem. It is, of course, recognized that India is a continent, and variations occur in accordance with race and locality. I have had pretty wide experience in different parts of India. I was for a period Civil Surgeon and Inspector of Tea Gardens, the Railway, and Coal Mine in Assam, besides being medical officer to certain tea gardens. I have also been Inspector of

Factories while Civil Surgeon in the Punjab, besides being for over ten years in charge of the Medical Store Department, Lahore, to say nothing of experience of various prisons, and as Medical Officer during the early making of the Mushkaf-Bolan Railway, and I have always taken an interest in the Labour question.

From the health standpoint, I can touch upon only three important considerations. If the pay is inadequate, and hours of labour excessive whether overtime be paid or not, the health is bound to suffer, be the hygienic measures ever so efficient. Many workpeople underfeed themselves and their families. Many either do not know what the correct food-principles are, or cannot procure them for want of supply, or of means. As Garden Inspector in Assam, I strongly urged upon Government the absolute necessity for supply of food containing the essential nitrogenous principles—namely, meat, milk, or peas and pulses. The law compelled supply of rice, but even where the flesh-forming nitrogenous part of the rice was not cast away in the water in which it was boiled, it was by no means adequate in the absence of the former. Vegetables were no efficient substitute for these, although very necessary, and, in the case of raw vegetables or fruits, absolutely essential for supply of the vitamins. Hence I affirm that much of the sickness and mortality, erroneously assigned to other causes, is due to these food deficiencies. Vitamines, be it noted, prevent scurvy, beri-beri (epidemic dropsy), and rickets, besides raising the body resistance to malaria and all other diseases. A valuable lesson was taught us during the expedition against the Mishmi tribes on our north-eastern frontier. As the success of the expedition depended upon the porter transport, I was alarmed to discover that the civil authorities had provided the Naga coolies with rations consisting practically of only rice, dried salted fish, and chillies ! Although I raised a protest very early, before the dietary was corrected the coolies immediately flocked to hospital with an epidemic of dysentery, and thus threatened the failure of the transport at the very outset. As soon as the rations were remedied the epidemic abated.

The Liquor Question is very important. Proprietors and managers as a general rule have often vainly protested against the implantation of liquor shops near their gardens or factories. The excise revenue seemed more imperative than the health, productiveness, and morals of the labourers. Market days became days of debauchery ; and while the liquor trade flourished, the victims and their families starved and died, or involved themselves inextricably in debt with the banias. Abolition of this demoralizing trade is certainly the only remedy, supplemented by education in morals and hygiene.

I also strongly support the provision of better housing generally and the prohibition of women employment in collieries, all to ensure good home-life and good morals.

Finally, the working-man is not to be regarded as a mere human machine for the extraction of out-turn. *Moral and social reforms are imperative to keep him in sound health and to prevent discontent and rioting—now so common throughout Indian industrial areas. Schools, primary and*

secondary, and various institutions for the encouragement of outdoor sports and mental culture are needed in every work centre. The cinema as an important recreatory and educational agent—very carefully censored and supervised by Government—must be here emphasized. *Trade Unionism*, if prudently guided and encouraged, would do much to take the place of the old native panchayet system, and serve to maintain order and discipline, while helping to settle disagreements before they assume importance to necessitate strikes or lock-outs.

Lastly, the question of *Central General Hospitals* for an area, to which all the sick from neighbouring industries or plantations could be concentrated for treatment, would prove a tremendous boon. It would be much cheaper, much more efficient, trained nursing could be introduced, and the medical staff would be far more independent and efficient. The centralization system is now enforced in the Army, British and Indian, throughout India to the immense advantage of all concerned. It has been also adopted by the Dutch, with the addition of a maternity ward, over the entire East Coast of Sumatra, with the result that the cost of the whole sanitation, including salaries, depreciation of buildings, welfare work, and so on, is as follows: Per labourer per year was in 1920, \$19'30; 1921, \$11'37; and 1922 only \$8'78. The death-rate percentage was in 1915 and 1918, 23'4; 1919, 44'6; 1920, 20'7; 1921, 5'8; 1922, 4'9, and 1923 (first half), 2'5. I take these figures from a medical report in the *Straits Times*, September 10, 1923; the population concerned is nearly 16,000 Javanese.

REPORT OF ANNUAL MEETING, 1923.

THE name of Colonel M. J. Meade should be added to those Members of Council who were re-elected at the Annual Meeting held on Monday, June 25, 1923.

THE FUTURE DEVELOPMENT OF INDIAN INDUSTRIES

By SIR CHARLES ERNEST LOW, K.C.I.E.

I SHALL describe, first, the industrial development of Western countries, as contrasted with that of India under British rule. I shall sketch briefly the present position of a few leading features in the industrial organization of India. I shall lastly attempt a slight forecast of some possible future developments.

In the industrial evolution of England in the eighteenth century we have the following data. There were a number of enterprising employers, men of education and wide outlook, with first-hand technical knowledge of their own simple industries; and a class of intelligent artisans, many of them self-educated and with an interest in their trade equal to that of their employers. A much closer personal contact existed between these two classes than is found under modern conditions. There were also a few scientists interested in industrial subjects, who joined their forces for the task. Foreign and domestic trade had built up capital, much of which was held by men used to taking risks. Into this fertile soil fell the seeds of one great invention after another, each rendering the ground possible for the next. The smelting of iron by coke gave the cheap raw material for the production of the next invention, the steam pump and the steam engine. The difficulties found in the early stages of producing these contrivances made men look round for some means of shaping working parts accurately, so as to ensure smooth running without leakage or jars. So power lathes and machine tools came into existence. These in their turn made possible the wholesale production of the numbers of parts

required by such machinery as power looms and spinning frames. The inventor was ready with these, too. Large-scale production was thus started in the textile and other industries. This meant large quantities of by-products, which furnished raw material for the chemical industry, previously conducted on a small scale. And all this time each industry was developing its own artisans and technical managers, and was making ever wider and more urgent appeals to the chemist in his laboratory. Technical education was at a later stage called in to shorten the old system of practical training and to produce, it was hoped, a more intelligent type of man. And as the great fabric of Western industrialism grew up, there grew with it a spirit of financial enterprise. All classes were ready to invest in industrial undertakings, and followed their progress with interest.

In the meantime, what was happening in the East? While in Europe the great industrial movement was slowly gathering way, India was convulsed with internal struggles. No Indian ruler in the eighteenth century had time or strength to build up a stable and prosperous commerce over a long period or a large area of country. The only power that followed this end was a foreign company, which at that time formed the sole channel by which Western economic ideas could reach India. The East India Company, though mainly interested in the export of India's unmanufactured products, was never unmindful of the country's industries, which it attempted again and again to improve; and if its efforts had no striking success, it must be remembered that they were undertaken in very different surroundings and with a very different agency from those which rendered possible the industrial development of England and the Western countries. These circumstances were a far greater handicap than the unfavourable legislation in England about which so much has been said.

Thus, when England was starting her modern industrial career, circumstances rendered it impossible for India to

follow her example. When she began to do so, she had waited so long that many difficulties had accumulated to prevent her from equipping herself with that industrial panoply which has already made Western countries so formidable and splendid.

The initial efforts in India were thus made on other lines and with other incentives than in Western countries. The obvious need for military and administrative purposes, as well as for the export trade of the country, was railways; and railways were accordingly built, thereby helping to stereotype still further the existing trade conditions, under which India was an exporter of raw materials to the country which ruled her and an importer of manufactured ones. These railways imported most of their stores, but set up large and well-equipped shops for repairs. They were always staffed with technical men from England in the supervisory posts; and though they served as a training-ground for a numerous and most useful class of Indian artisans, little or no attempt was made, either in the railway shops or elsewhere, to produce mechanical engineers of the supervisor type. Even of Indian foremen the Indian Industrial Commission were able to hear of only one or two in railway and other engineering shops. One of these was the son or grandson of a skilled artificer who had served in the arsenals of Raja Ranjit Singh. But this single instance is enough to show what might have been had Indian political conditions in the eighteenth century been a little more like those enjoyed by England.

The great textile industries came even before the railways. Textile materials existed in abundance on the spot; labour was cheap, if not very efficient; the machinery could be imported *en bloc*; there was a ready demand for the products; and thus a profitable industry sprang up, living like the railways on imported machinery, and getting its ordinary repairs done in local shops.

Other industries were established as time went on; but though some of them demanded rather deeper industrial

foundations than the railways or the textile mills, they added but little to the real technical equipment of the country, and in no way changed the main features of its industrial scheme or corrected the vicious bias already imparted to its line of progress.

[I purposely leave out of this brief preliminary picture the various efforts made by Government to encourage individual industries. They affected the broad lines so very little. The first real attempt to systematize technical education was not made till the eighties, under the influence of the similar movement in England. Though much has been said on this subject, it has been on the whole unsuccessful till quite recent years, and in any case its practical effect in adjusting the distorted spine of industrial India has been negligible. The same is true of the efforts made in Madras and elsewhere to encourage small agricultural and other industries and to produce the class of artisans needed to operate them, which have been pursued for too short a time, with too fluctuating a policy, and on far too small a scale. For these efforts might, if steadily pursued on a wide scale over a number of years, make a real difference in the industrial equipment of the country. I will therefore deal with them a little more fully at a later stage.]

It is perhaps worth while, before passing on to the next part of my paper, to hold a *post mortem* on the hand which the Indian Government had to play. Supposing that from 1830 onwards the Government had deluged the country with technical education—then, by the way, almost unknown in any country in the world—where would have been the living examples of industries to arouse interest? Where the prospect for employment of the educated pupils? For technical education cannot of itself make industries. Or, again, supposing the country had been hermetically sealed against the competition of the already advanced industries of the West, and local manufacturers had been helped by outside expert advice, by Government subsidies, or by a duty on exports of raw material? Does anyone

seriously believe that even with the most thorough protection against competition, the fundamental industries necessary to support a properly balanced fabric could have been built up? Apart from the extremely doubtful question whether the technical knowledge then existing in England would have been enough to ensure the successful production in India of steel with Indian coal, does anyone seriously contend that the Indian capitalists of the early or middle nineteenth century could or would, with any amount of Government pressure or assistance, have started and successfully run shops for the production of tools or machines? Where would have been the demands for their products? And lastly, where would their capital have come from without railways and an active export trade?

At a later date, Japan did this very thing, it is true, or something very like it; but Japan was neither a subject nor a divided nation; she possessed a ruling class whose tradition was to express their patriotism in every form of self-sacrifice; and it must not be forgotten that a later generation marched to victory over the wrecked fortunes of many of the Samurai, who had ruined themselves in one unsuccessful enterprise after another. It may be said that the Government might at least have given the people the chance to fail. Well, in the first place, the people did not want it then nor till long afterwards, when India had been thoroughly committed to its present system; and, in the second place, a failure of this kind is exactly the kind of mistake which a foreign Government can least afford to make.

No, given the then existing data, I cannot honestly see any other better result than that which actually emerged; and I can imagine several much worse ones.

So far I have attempted to set before you a rapid cinema record of the development of Indian industrial history in the past two centuries. I will now throw on the screen a few "close-up" pictures of one or two of the star features of Indian industry as it stands to-day, before attempting my forecast of further possible developments.

And first of all I must say something about Indian labour. With few exceptions the Indian industrial worker is still essentially drawn from the floating surplus of the land labour force. Surplus is the right word; for although there are many square miles of waste land fit for cultivation, and although much of the cultivated land is cultivated very inadequately, yet the farm labour force is most wastefully employed if the yield per worker is considered. Thus the output of the land is in some places not enough for the workers to live on, and many of them flock from the drought-smitten uplands of the Deccan, from the congested plains of Behar and the Northern Circars, to the cotton-mills of Bombay and the jute-mills of Calcutta. For these the life of city and factory exercises as yet none of the attraction that draws the English villager to the towns. The Indian peasant does not like the expensive city life and the confinement and discipline of the factory, and finds his way back to the open air and wide fields of his native place as soon, and as often, as he can afford to. Usually he contrives, at any rate, to pass his declining years there. The census reveals how astonishingly low is the proportion of elderly persons found in industrial cities like Bombay. In the absence, then, of hereditary or even continuous connection with industry, is it surprising that the technical skill of Indian mill-workers shows little if any improvement, and that there is a chronic shortage of industrial labour?

Recruitment is effected by men known as jobbers or sardars, who keep their hold over the men engaged by them in the mills, where they themselves are employed. Their influence is almost invariably opposed to anything that will improve the efficiency or even the physical welfare of the workers. Given the real distaste for city life, the ignorance and backwardness of the workers, it is not surprising that a special recruiting agency is necessary, and that its hold is not easy to relax; but its existence is another serious obstacle to the technical improvement of the Indian labour force. The housing of factory workers in some of

the big cities has been, and still is, very bad, scandalous in many cases ; and no doubt this helps to keep Indian labour away from the big cities. Suitably planned industrial colonies, under conditions somewhat more nearly approaching those found in Indian villages, would be correspondingly attractive. Owing to the cost of land, such colonies cannot, it would seem, be established in urban areas. But really substantial efforts are now being put forth to remedy the housing scandal in the cities ; and definite attempts at welfare work are also being made by the employers and by outside organizations.

It must not be supposed that the figures of the account are all to the labourer's disadvantage. In the village he is usually landless and hopeless, and often a debt-serf. He is from the money point of view, in spite of the rise in prices, much better off than before the war. The money-order remittances sent from the Bombay post offices mainly used by mill hands have increased nearly 150 per cent. in the last nine years. But until there is a rather closer resemblance than at present exists between his village home and the place where he lives when at work, the Indian labourer will never reach anything like his possible level of efficiency.

One branch of Indian labour is, however, somewhat of an exception to the foregoing generalizations. The Indian engineering artisan is more cosmopolitan and more intelligent by far than the textile or mine worker. He is much more ready to move from place to place in search of better conditions, and has some sense of craftsmanship. A Punjabi turner on piece work will gear up his lathe and make the chips fly in the effort to earn as much as he can by the end of the month, just like a Western workman ; and there is more brightness and snap in the way orders are given and taken in an Indian engineering shop than in a mill. In this class of labour we see emerging something more like the ideal type of the future.

I cannot leave the subject of Indian labour without saying a word or two about Indian Trade Unions. Until very

recent years Trade Unions were practically limited to industries employing a large proportion of Europeans or Anglo-Indians; but during the war a number of purely Indian Unions sprang up, and under the stimulating conditions of rising prices, labour shortage, and world unrest, they made during the years 1918-21 startlingly rapid progress. Since then there has been under opposite conditions a very rapid decline in their numbers and activities. The Unions of Ahmadabad, which are organized on the craft basis, have stood the adverse conditions best. These Unions are, in the absence of educated workmen with experience as organizers, controlled by outsiders, mostly politicians, with no direct interest in labour. I do not see what else could be expected. Much the same thing happened in England in the early days of Trade Unions. But there are not wanting signs of a genuine effort on the part both of labour and of its outside organizers to give the actual workers a more effective share in the control. Things are only at their beginning. Few of the new Unions have any funds worth speaking of; subscriptions are not regularly paid; the roll of membership is sketchy. Unions spring up when a strike is in view and melt away when it is over. But even the little that has been accomplished is wonderful to those of us who remember how a very few years ago an Indian mill hand would have fled in terror from the mere suggestion of a regular subscription to a labour fund. More education, a higher standard of comfort, a more settled and skilled labour force are all necessary preliminaries for the development of Indian Trade Unionism. When it comes—and here I will venture to anticipate the second part of my paper by inserting a forecast—I think its basis will be found in a number of small local craft Unions, ready to form loose *ad hoc* combinations to deal with emergencies, rather than in "Industry Unions," including large numbers and controlled by elaborate central organizations; it will follow, in fact, the example of co-operation, where the primary society shows

every sign of becoming an organic part of village life, while the large central organizations are relatively weak and are held together mainly by the efforts of persons outside the movement.

My next picture is that of the two great textile industries, cotton and jute manufacture. These, as I have said, were imported from England holus-bolus, machinery, organization, and all, and plumped down in Bombay and Calcutta, where they have multiplied as rapidly as imported creatures often do. They have improved very greatly the position of the Indian cotton and jute farmer; and they have not worsened that of the Indian weaver, who undoubtedly consumes a great deal more yarn than he used to. Best of all, the cotton-mills have provided decent clothing for millions of the poorest classes, who in their absence would not have had the wherewithal to cover their bodies. But the weak point of the textile mills is that they are exotics; not like a living plant drawing material for fresh growth from the soil and water of the land where it lives; but a mere window-box full of gaudy blooms, which has to be renewed again and again from the greenhouse or else it sinks into decay. There are no local machinery makers driven by force of competition to seek for constant improvements and to adapt Western machinery to local conditions. It needed a great effort during the war to get even simple fittings like pickers and roller-skins made in India, and a still greater one to get Indian mill-owners to use them. The textile industry has thus failed to become organically part of the industrial system of India. Even the mere running of the mill machinery is largely in non-Indian hands. This is entirely so in the Calcutta jute-mills; and in Bombay those mills that regularly demand a higher price than their neighbours for the same make of cloth are those which employ a larger proportion of Europeans among their technical staff. The shareholders of the Bombay and Ahmadabad mills and their non-technical managers and directors are, it is true, almost all Indians, which is so much

to the good ; but in the jute trade, which demands a much wider knowledge of world conditions and international finance, the directorate, as well as the technical staff, are all European, although a still increasing majority of the mill shares are in Indian hands.

Mills in India have hitherto been run mainly on coal. Coal in India suffers from three disadvantages : it is too local, too bad, and too cheap ; and there is not really enough of it. It occurs usually in thick and fairly dependable seams and is easy to work, though high in ash and in phosphorus. The iron ore, on the other hand, exists in immense quantities, and is of very good quality and by no means high in phosphorus. But being necessarily brought into direct contact with the phosphoric coke in the blast furnace, it produces a pig-iron which cannot be converted into steel by the Bessemer process. Moreover, Indian coal generally contains a large admixture of grit, which is intimately mixed with the coal, and cannot be washed out by the processes hitherto available. Experiments are, however, being conducted in India which warrant the hope that large quantities of coal hitherto unsuitable for coking may be utilized for that purpose in future.

The cheapness of Indian coal has hitherto prevented the introduction of desirable improvements in working, and led to the indiscriminate use of different qualities by consumers.

It is all-important for India to conserve as far as possible her supply of metallurgical coke, since it seems probable that the estimated coal resources of India are, under present conditions, incapable of supplying over a number of years a large-scale iron and steel industry.

It is to be hoped that the new scheme for the finance of railway construction will enable the railways to offer an adequate and certain supply of waggons ; the lack of this in the past has been responsible for much of the hand-to-mouth working and backwardness in Indian coal-mining. The falling-off in demand has meantime given a welcome *moratorium*. A regular supply of properly graded coal will

lead consumers to select the quality best fitted for their purpose, and to use it economically, with advantage to themselves and to other users. There are other difficulties in the way, but lack of time prevents me from dealing with them here.

My last individual picture is that of the iron industry. The great efforts made in Madras by Josiah Heath, with the liberal aid of the Indian Government, failed owing to the fact that a large-scale iron industry could not be run on a basis of the wood fuel locally available. I may say, in parenthesis, that this objection does not necessarily apply to the existing Mysore enterprise, which is intended to produce iron of a special type. At a later stage the Bengal Iron and Steel Company started operations; and after several failures, owing mainly to the unsuitable nature of their ore, had come within sight of success, when the modern large-scale steel enterprise, for which Indian industrial development had been so long vainly looking, was at last launched by the enterprise of an Indian citizen and with the support of Indian capital. I must not omit here to mention the great assistance given by the Indian Geological Survey—a technical department which has owed its practical usefulness to industry to its close touch with the industrial needs of the country. But the creation of the enterprise would have been impossible without the courage and foresight of the late Mr. J. Tata and his heirs' loyal devotion to his ideals. Here was a real attempt to supply a steel underpinning to the already built but insecure industrial superstructure. But the output of steel in India is not as yet on a sufficiently wide scale to admit of the production of the special kinds of steel and ferro-alloys that are needed to render India in any way self-contained. Steel suitable for cutting tools, for springs and for the tyres of railway wheels, for instance, all have to be imported. Nor is the scale sufficient to give as yet the raw materials for the manufacture of many articles of iron and steel which the country requires. For instance, it is out of

the question to make parts for the construction of ships, unless they can be produced in great diversity and on a large scale ; and for this India has neither the material nor the markets. Most important of all, the training of an Indian superior technical staff, though earnestly desired by the Tata firm, has not as yet succeeded to an extent which would warrant any serious replacement of the imported staff.

Though the bright hopes of rapid development which characterized the boom period of 1918-19 have somewhat faded, yet progress has been made. Plates and sheets are being rolled ; tinplate manufacture is starting ; there is a promising manufactory of agricultural machinery on up-to-date lines ; wire and electric transmission materials are being produced, and there are other ventures under way. More capital and more confidence are needed ; and India must show that she can produce more cheaply than outside countries, with so many advantages in her favour. That she will do so ultimately I have no doubt.

And now it is time to leave the solid ground of history and fact and to climb the insecure ladder of prophecy. I will try to deal with the future under two heads : first, the directions in which I think development will naturally occur in the future ; and next, what should be the policy of Government.

If the country continues, as I earnestly hope it will, to enjoy the benefits of peace and settled government over a long period of years, capital is bound to increase at a rate which will render a substantial amount available for industrial investment after providing for the other needs of the country. For it is hardly necessary to insist on the fact that India must always be primarily an agricultural country, and that industries must always take a secondary place in her economic life. But that is no reason why a more ready supply of capital should not become available for industrial enterprise, to fill up gaps and strengthen weak places, and ultimately to equip India with an industrial

structure small, perhaps, in proportion to the immense size of the country, but at least well balanced in all its parts. Now, where is the capital to come from? The difficulties that have hitherto existed are well known. The people are shy of new enterprises. But this attitude is changing. In Bengal in 1907, in the Punjab in 1912, and more or less all over the country in the post-war boom, people for a short time were eager to put their money into industrial enterprises. That three such industrial booms could have occurred at such short intervals in spite of each preceding failure is very significant. And if the results were discouraging, is it not true that the high cost and low interest of Government securities, and of the few gilt-edged industrial undertakings, are in a different way not less deterring? for there are not wanting signs that these channels of investment are tending to fill up and that the current will ultimately have to flow elsewhere. A more extended banking system with more modern facilities for the movement of money, such as has been aimed at by Government, will help to this end. It will be remembered that each of the three industrial booms were accompanied by the flotation of a number of banks designed to finance industries; for those who desired to advance industries at any rate saw that the creation of the banking habit among the people of the *mofussil* was a necessary preliminary. But these banks were crudely conceived and ill-managed. They invested far too much of their resources in the new industries. They were not, in fact, banks, so much as mechanisms for raising industrial capital. I think, however, it is fair to observe that each time the design was a little better than the last; and the post-war boom had really hard luck in bumping up against the exhaustion of the world's spasmodic buying effort that followed. But now the extension of banking facilities is taking place as an end in itself, not as a system of money-traps to catch money for industries. Old-established institutions are extending their branches all over the country, and are not

at all likely to encourage a mischievous boom in industries or in any other form of enterprise. But the mere extension of the banking habit among large classes of the community cannot fail to add to the money available for industrial investment; it is, in fact, the main thing needed for an advance on sound lines.

Another factor in future industrial expansion will be found in the gradual decentralization of industries. Capitalists will be more and more influenced as time goes on by the physical, financial, and political difficulties created by the crowding of vast masses of workers into the two great seaport towns; and these difficulties will tend to outweigh the advantages of Bombay and Calcutta as financing centres and of the favourable railway rates hitherto enjoyed by them as seaports. Coal and the cost of its transport are certain to grow dearer with an increasing demand, with the necessity of more systematic working, and a rise in the low wages and low standard of comfort of the miners, the most backward class of Indian labour at present. On the other hand, the possibilities of transmitting electric current for long distances are becoming greater and greater. Hydro-electric installations will spring up within two or three hundred miles from the Himalayas and from the lower mountain chains of the Peninsula, offering power at a relatively cheap rate to industries over a wide range of country. Local capitalists also will be more ready to undertake enterprises in their own immediate neighbourhood, where they will be free from the risk and expense of producing power, and where labour can be easily recruited and be housed cheaply and comfortably under village conditions. Urban industrialists will be tempted or compelled by competition to follow their example. A country not too well supplied with capital, with an insufficient or ill-distributed coal supply and with electric power readily available, is, I think, very likely to develop scattered groups of relatively small factories lying along the electric transmission systems, which will doubtless be paralleled by

roads or light railways. This has been markedly the case in Italy, where the conditions of India are much more nearly approached than in England. Well-to-do land-owners, with money in the bank, would be ready enough to invest it in a small factory to be erected close to their own doors. The existence of these small local works will increase the demand for machine parts and tools and stimulate the erection of manufacturing rather than repairing shops. This, indeed, is a development so obviously profitable that it is sure to come in any case; but the existence of a number of small factories that will be content to buy less well-finished plant at a lower price will help it immensely. The travelling millwright and machinery erector will be called for in numbers, since the small scale of these works will not always permit the employment of expensive imported engineers.

The presence of small factories in rural areas will have its effect on agricultural methods by popularizing the use of cheap machinery and power plant for pumping, grinding, and other necessary farming operations. The process of familiarizing the agricultural population with industries will thus move in two directions, to the advantage of both agriculture and industry. And the extended use of cheap agricultural machinery and tools will offer a market to the Indian manufacturer.

Practical familiarity with industry will have a social and intellectual effect on the educated middle classes. Our old reproach against them was that they wouldn't take their coats off, wouldn't dirty their hands, wouldn't keep factory hours, hated practical work in the shops or technical schools, or even a year's apprenticeship after a technical course, and looked at it as a nasty experience to be endured and then forgotten as soon as possible in the relative ease and comfort of office life. But I think that one did them an injustice. If I were to put these Indian boys' thoughts into the language of an English public-school boy, they would have been something like this: "These are the

sort of thing that fellows in our set simply don't do, you know." Their objections were, in fact, social and sentimental, rather than physical or intellectual ; and when these begin to disappear they will do so very rapidly. The Indian educated middle classes are not as keen as their opposite numbers in the West on making fortunes. But they are just as keen as anyone on making enough for themselves and their families to live on decently. Given the continual economic pressure ; given the familiarity with industries and the change in the social outlook on industrial work ; and a few successful beginners will draw crowds of followers behind them. The process, in fact, has already begun. I had occasion in 1913 to enquire as to the number of Bengali middle-class youths earning a living in Calcutta by factory labour. I could hear of half a dozen only, all driven thereto by some exceptional misfortune or disgrace. In 1917 I saw in a single small factory a couple of dozen such lads working under strictly industrial conditions and earning decent money by piece work at a lathe, with the ultimate idea, perhaps, of qualifying as foremen or managers, and this process is continuing. The railway and other engineering shops now find plenty of applicants from the ranks of the educated middle-class Indians.

Thus, on the side of finance and supervision I think that the increasing decentralization of industries will be the most important feature of the next epoch. But there will be great advances along other lines, some of which will tend to accentuate the lopsidedness of Indian industry, and others to restore the balance.

In the first place, as I have already said, the big-scale fundamental industries of iron and steel production and the manufacture of plates and sheets, tools and machinery, is bound to progress. There is a possibility of profit in it which cannot but attract foreign if not Indian capital. Money is bound to find its level sooner or later, and when a channel of profitable investment has been opened, money will flow in until that channel is full (and perhaps even for a

little longer). I have spoken of the investments of foreign capital, but it must be remembered that an enterprise started in a foreign country is bound to assume sooner or later the complexion of the country in which it is planted, or die of inanition. Capital and direction alike are gradually taken over by the children of the soil. This has been the case in many European countries; and though the process has been slower in India, where the industrial idea has been only slowly assimilated, it cannot be delayed much longer. We have seen already how in Calcutta the majority of shares in the jute-mills—institutions founded originally by Dundee capital and maintained as the special preserve of the East Coast Scotch—have been bought by Indians; and a majority of shareholders usually want representation sooner or later in the management. They may be willing to recognize that profits are earned by superior directive ability, but they will want a director or two to start with, and will press for the reception and training in the mills of Indian apprentices. Similarly, I feel sure that, whoever may start the long-awaited manufacture on a large scale of machinery and tools in India, the factories themselves will be Indian owned and run after no great number of years. That this process is likely to take place at a greatly accelerated rate in future is almost certain, in view of the changing political conditions. Moreover, it must be remembered that anything in the nature of a Government concession nowadays involves as a *quid pro quo* the admission of more or less Indian capital, and in many cases the admission and training of Indian superior technical staff.

I look to see also, though with less confidence, the organized manufacture of chemical products in India. The raw material will be available in plenty from the coke ovens, the sugar-cane mills, the wood distilleries that are already existing or will soon come. The possibilities of training the requisite number of industrial research chemists who will work for relatively low salaries are obvious. But so much

depends here on the co-ordination of progress, the danger of vested interests establishing themselves and turning the course of development in the wrong direction, and the initial stages will be so costly and so little fruitful in results, that I do not see how anything really satisfactory can be achieved without some definite and extensive Government intervention.

And the textile industry, like the poor, will be always with us. The rising standard of comfort among the people will lead to a greater demand for finer cloth. India with extended irrigation facilities can certainly grow a large area of American cotton in the Punjab and elsewhere, and an appreciable amount of Egyptian cotton in Sindh. She has also a most promising foreign area of supply near at hand in Uganda, and doubtless in Mesopotamia. Even in 1916 one or two Bombay mills were spinning counts up to eighties from Uganda cotton. The increase in finer spinning will make the need for skilled workmen more urgent, and doubtless the increasing use of automatic looms and other improvements will tend in the same direction. Mill owners will thus be forced to aim at a more permanent and more skilful type of labourer. More attention will be paid to industrial training and welfare work, and a premium will be put on the establishment of industries in places where conditions of life for the workers will be sufficiently pleasant to induce them to settle there and bring up their children to their own trade. Hereditary employment is, it must be remembered, far more natural to India than to Lancashire.

Given the existence of a real engineering industry in India, it is reasonable to suppose that circumstances will sooner or later give an opening for the manufacture in India of some forms of textile machinery. It will be interesting to see when this happens how far the inventive faculties of Indian engineering designers will rise to the occasion. Hitherto one of the reproaches against the few existing Indian mechanical engineers and technical

industrialists has been that they have invented nothing. I think this reproach is peculiarly unfair. In the first place, this class is very few in numbers ; in the second, it has not been engaged in work of the kind that requires or even encourages invention. When he is confronted with the necessity of manufacturing tools and machinery on a fairly large scale in competition with imported articles, we shall then see whether the Indian mechanical engineer will evolve improvements designed to cheapen the cost of manufacture or increase the usefulness of his productions under Indian conditions.

Last of all, we have to consider what part Government is likely to play in the course of this development. Politically, things have altered a good deal since the Industrial Commission wrote its Report. It seems unlikely that the Central Government will ever attempt the pioneering of large-scale industries, or that the Provincial Governments will have the funds or equipment to do so successfully. Research will doubtless be actively pursued, as soon as financial conditions permit, by all the Governments, and side by side therewith the training of industrial chemists to deal with the by-products and raw materials of the country.

As regards protection, I presume that it will tend, as elsewhere, to become a political question between consumers who want to buy cheap and manufacturers who want to sell dear. The former are at present ignorant and unorganized. The Tariff Board's enquiries are, at any rate, going to teach Indian opinion that there are two sides to every question, and that you can seldom protect one of your home industries without hurting others.

At any rate, whatever the policy adopted, it is likely to be one of protection against cheaper prices, not against higher quality. India, in spite of the claims put forward for protection by the steel industry, ought to be able to produce the simpler classes of products more cheaply than any Western country ; and she is bound to do so, sooner or later.

But by far the greatest and most useful share that Government can take in the task will be the provision of suitable craft and technical training, either directly or through the industries themselves. Technical training cannot make industries, but modern industries progress very slowly without it. Private enterprise must create the demand for the trained man, and Government must see that he is forthcoming as he is wanted. In the absence of such demand, technical training has languished in the past, and its products have been discredited.

Something more practical could have been done. The railway shops in the past were never fully utilized as a training-ground for engineers, though they have turned out large numbers of very useful artisans. The railways, perhaps, did not take the matter quite seriously enough. Such training as they provided was sufficient for the few European and Anglo-Indian youths who came forward, lads of very moderate education and mostly the sons of men already employed as railway subordinates. The theoretical training given to the apprentices outside the shops was extremely poor, and the practical training inside the shops was rather haphazard. To Indian youths the classes were practically closed, since the conditions and prospects offered did not attract middle-class lads, nor was there, indeed, any effective demand by this class until very recent years. This state of affairs is in process of being altered, and an effective start has been made by at any rate two large railways, the Eastern Bengal and the North-Western, whose example will doubtless be followed generally. But railway-shop training, though excellent in its way, is not ideal for all branches of mechanical engineering. A beginning has, therefore, been made in Calcutta, where a Central Board, set up by Government at the instance of some leading Calcutta industrialists, European and Indian, co-ordinates a number of apprentice classes in the non-railway engineering shops, and provides the theoretical training required. I hope that for a long time to come industrial

training for Indian mechanical engineers will be based on the engineering shop. The bias toward theoretical study is very strong among Indian middle-class youths who are unfamiliar, as I have already explained, with the idea of industry; and it will for long have to be corrected by slightly overweighting the practical side of training. This will also have the advantage of weeding out the unsuitable. The pupils who pass through these apprenticeships will fill the increasing demand for Indian mechanical engineers on the railways and in industries generally.

Not less important than the training of the superior staff will be that of the artisan and craftsman, especially in rural areas. This will be taken up along with the encouragement of the use of machinery in agricultural and rural industries on the lines followed for some years past in Madras. The use of such machinery will reduce the cost of many agricultural operations, will render the employment of agricultural labour in some ways less wasteful and inefficient than at present, and will extend the cultivation of several valuable crops. It will also help greatly to familiarize the rural areas with the industrial idea. And as one machine after another is successfully introduced by the departments of industries, its further commercial development, including, of course, its manufacture in India, will naturally be taken up by private enterprise. In addition to the agricultural application of machinery, provincial departments will take in hand the training of the weaver, the carpenter, and the blacksmith. The first is, in spite of all that has been said, a very sturdy indigenous plant, and is by no means likely to be crushed by mill competition within any period that is now in sight. Certain special types of cloth for local use, and even for export, can still be made best and most cheaply on a hand loom, and it is to the demand for these and to the now rapidly progressing introduction of the fly-shuttle loom that the Indian hand weaver owes his firmly established position.

In all these lines of activity, Provincial Governments

and local authorities are likely to take an increasing interest. The goal in sight is not too distant, the practical results of success are easily apparent, and the cost is relatively small. Rural and agricultural industries can be very well included in the system of co-operative finance and organization which, in spite of the difficulties and losses that it is bound to meet from time to time, will in some form, perhaps, that we do not at present foresee, exercise in the future a potent influence on Indian rural economy.

To sum up what I have said, we may expect to find India develop a system of industry that will be, not self-sufficing or self-contained—for that is beyond the power of any country—but at least symmetrical and well balanced. Much was said and written under the stress of war conditions about the necessity for a country being industrially complete for fighting purposes. No country can achieve this end completely, though India might, perhaps, come nearer to it than most countries. The ideal I have in mind is something different. It is, I think, more practical, and will result in a system much more useful under peace conditions; it will be useful in war, but it will not depend on the war spirit, a spirit you are never likely to find in India. What I hope to see is the utilization in the fullest and most appropriate way of the resources of the country in men and materials, for the benefit, first of the country itself, and next of the rest of the world; remembering that every nation therein is a member of one economic body, and that it is to the advantage of none that another should fail to prosper. This is the natural line of development towards which India, though she has temporarily under the force of circumstances swerved aside, is bound sooner or later to return.

Just one more word before I close. Some may ask, Will not England be a loser by this development? I am sure, on the contrary, that she will be a very great gainer. Some of our industries will lose; others will benefit; the demand will change; but on the whole it will increase very

greatly in value. The development of Indian industries and the improvement of Indian agriculture will mean a great rise in the standard of comfort and efficiency of the Indian. England stands to gain immensely by a replacement of the demand for low-quality articles by one for those of higher quality. In the skill of her workmen and in the production of the really first-rate lies the industrial strength of England, not in the wholesale output of cheap articles, such as India and other tropical countries have been content to buy hitherto. Here British pre-eminence is, for so long as we can foresee, almost everywhere secure. Nor can the industrial development of India be accomplished without offering for many years to come a vast field for the employment of skilled foreign supervisors.

DISCUSSION ON THE FOREGOING PAPER

A MEETING of the East India Association was held on Monday, December 17, 1923, at the Caxton Hall, Westminster, S.W., at which a paper was read by Sir Charles Ernest Low, K.C.I.E., entitled, "The Future Development of Indian Industries."

Sir Thomas H. Holland, K.C.S.I., K.C.I.E., F.R.S., occupied the chair, and the following ladies and gentlemen, amongst others, were present: The Right Hon. Lord Pentland, G.C.S.I., G.C.I.E., General Sir Edmund Barrow, G.C.B., G.C.S.I., Sir Patrick Fagan, K.C.I.E., C.S.I., Sir Francis Spring, K.C.I.E., Sir Duncan J. Macpherson, C.I.E., Sir Alfred Chatterton, C.I.E., Sir Joseph Henry Stone, C.I.E., and Lady Stone, Sir William Owens Clark, Mr. Alexander Porteous, C.I.E., Mr. F. H. Brown, C.I.E., Mr. H. Kelway-Bamber, M.V.O., Mr. N. C. Sen, O.B.E., Dr. Gilbert Slater, Miss F. R. Scatterd, Mr. F. J. P. Richter, Mr. F. C. Channing, Mr. D. E. Keatinge, Mr. S. W. Owen, Mr. H. R. H. Wilkinson, Major G. W. Gilbertson, Mr. E. C. Emerson, Miss N. Corner, Miss E. Wileman, Miss Sasek, Mr. J. C. Goho, Mr. S. C. Bose, Miss M. Sorabji, Mr. A. R. Nayyar, Mr. P. C. Gangoly, Mr. L. D. Kochlar, Mr. W. S. Hunt, Miss Partridge, Mr. and Mrs. W. F. Westbrook, Mr. K. T. B. Tressler, Mr. J. R. Orton, Dr. R. W. Hornabrook, Mr. James Sevestre, Miss Rosanna Powell, Mrs. Drury, Miss Anna Merton, Mr. Headley Storey, Mrs. Meyer, Mr. Arnold Lupton, Mr. R. D. Galbraith, Mrs. Halliday, Miss Spence, and Mr. Stanley P. Rice, Hon. Secretary.

The CHAIRMAN: My Lord, ladies and gentlemen, it is somewhere about twenty years since I realized Sir Ernest Low's devotion to questions connected with Indian industries. He was then saturated with the difficulties—and afterwards, I am glad to say, gratified with the success—of the Nagpur Exhibition. From that time on Sir Ernest Low has been to my knowledge in touch continually with Indian industrial questions. He was afterwards Secretary for the Government of India in the Commerce and Industry Department; and he was a member of the Indian Industrial Commission. He was also a member, and afterwards President, of the Indian Munitions Board. I know of no one who is better able to give you

a well-balanced account of the present state of Indian industrial questions; and I know no one that you may rely on so safely for a forecast of the future. I will now call on Sir Ernest Low to read his paper. (Applause.)

The paper was then read.

The CHAIRMAN: Ladies and gentlemen, as one of those who have spent the last seven years in an intensive study of Indian industrial conditions, I can form some estimate of the amount of work and thought that Sir Ernest Low has condensed in his paper.

There are single sentences that I recognize as the final and refined product of many weeks devoted to the analysis of blue-books and to the discussion of evidence given by experienced and reliable witnesses before the Industrial Commission. There are sentences which represent also the final distillate of painful experience in our attempts, under the compelling necessity of war conditions, to encourage the manufacture in India of articles and materials that under normal economic influences had hitherto been imported regularly from abroad. After all our many vain, and very few successful, attempts to change the configuration of India's trade by local manufacture, Sir Ernest Low now gives a hopeful—almost an optimistic—picture of the future. I wish I could share his hope. He is but one among the majority of English officials who have spent their best energies in single-minded devotion as trustees of India's national interests—men who, in relinquishing their charge, are less anxious about the efficiency than the unselfish patriotism of those who clamour to be their successors. As I have said, I wish it were possible to share Sir Ernest Low's hope for the near future. We are told that the Indian services will now suffer from depreciation in efficiency—well, efficiency in administration is not everything, so we can put that aside. We are told that political considerations will divert administrators from single-minded devotion to the people's real needs—even political expediency sometimes has its national uses, so let us put that aside. But there is one consideration that cannot be despised. Crystallographers will tell you that when there is no regular arrangement of the molecules in a body, the forces, pulling in innumerable directions, produce an apparently homogeneous structure. But when the molecules are regularly disposed according to an established and definite structural law, they also produce a homogeneous body. The resemblance between the two, however, is purely superficial, for one is an amorphous body, whilst the other is a crystal—stable and secure. The molecules in a crystalline body are exactly the same molecules as those in the amorphous body, but there is a concerted directional purpose in the crystal and a perfect neutralization of well-meant effort in the other—a state of unstable equilibrium which facilitates the regrouping of activities around local centres whenever local disturbances occur. There is always a danger in applying natural laws to human affairs, but there is an even greater danger in despising the lessons suggested by such analogies. Let us take one feature among the conditions that are essential for industrial development—namely, the classification of functions under the Government of India Act, 1919. Certain activities in which local conditions predominate have been rightly delegated to provincial control. Others, like the posts and telegraphs, being essentially national in their bearing, have been retained under the direct administrative control of the Government of India. The provincial subjects are divided into those that are reserved to the so-called bureaucratic section of local government and others that are transferred to the control of popular ministers. The recent elections show that the word "popular" in some cases is used in a technical sense rather than in its etymological meaning. This new principle of so-called dyarchy has come under a certain amount of criticism because, and I think only because, it has a political significance. So far as our present subject goes there is little difference between the

reserved and the transferred conditions. According to my experience the bureaucratic official has always shown a more intense provincial patriotism than the elected Minister. In my evidence before the Joint Committee of Parliament I gave reasons for supporting the proposal of the Government of India to retain the development of industries as an all-India subject, but when that proposal was overruled, I welcomed its transfer to the provincial Minister as a distinctively palliative measure. My desire to retain the development of industries as a central subject had thus nothing to do with dyarchy or politics: it was due to the convictions that the conditions which affect modern industries are national, not provincial, in nature—the chief raw materials are obtained in one province, the accessory materials in another; transport questions inland, as opposed to those towards the chief ports, remain an all-India question; fiscal reforms that benefit an industry in one province must cut across the interests of others in another province and affect all consumers alike; the technical problems on which industries of real value are based can rarely be solved in any one institution or by any specialists that any provincial Government is likely to support. Provincial Governments may encourage handloom weaving or the manufacture of toys, but, without organized research work, correlating the results of various scientific specialists and maintained for many years, there will be no real progress towards removing what Sir Ernest Low calls the lopsidedness of the Indian industrial configuration. No Provincial Government is going to maintain the staff that is necessary for this work. It is not a case of imitating in India what has been done elsewhere, for the only feature that one can be absolutely certain of is that conditions which favour the growth of technical industries in other countries will not suit India without modification. Differences in raw materials, in labour, and in markets, necessitate the adjustment of differences in technical and commercial methods. When Parliament, working as usual by the law of change, decided in favour of provincializing the development of industries as an administrative subject, I attempted to forestall the injury so done by devising some machinery for keeping the Provincial Departments of Industries in touch with one another. We arranged half-yearly conferences of the Ministers and Directors of Industries; we established a monthly circular to enable the Provincial Departments to know what the others were planning; we published a quarterly journal to let the public know what activities were in progress; and we issued occasional bulletins dealing with the more finished results; but economy and other imitative forms of expediency have foiled most of these devices—devices to prevent the Provinces from drifting apart.

And thus, so far as I can see into the future, there will continue that marked deficiency of "middle-class" industries, the class of industry which is essential for India's stability as an economic unit, and for its safety from the military standpoint. Protective tariffs, like tonics for the convalescent who has a sound constitution, are useful if taken in medicinal doses to tide over limited periods of indisposition; but, without the means for developing industries on sound lines, resort to tariffs is as dangerous and as degenerating as taking to drugs. Ten years hence India will discover that most of the industries which have benefited by protection tariffs are those that could live quite well without them. (Hear, hear.) India industrially will still be, as it now is, a country of high lights and deep shadows. It includes the highest and youngest mountain range in the world side by side with the oldest and most stable peneplain known to physical geographers. Its two great textile trades flourish side by side with complete dependence on the outside world for nine-tenths of its civil as well as its military necessities. Between the social extremes of its people there has been hitherto a negligible body of middle-class workers such as those who have made England an industrial country. If the agricul-

turist's prayers are answered, he has to protect his crops from damage by floods; if not, he is ruined by famine. It was to tone down such violent contrasts that the Industrial Commission worked out a scheme for a well-balanced development of industries, having regard to the necessities of technical training and scientific research on a basis of primary education, with the spread of banking and the development of healthy conditions of labour. Ten years hence thoughtful patriots in India will turn over the pages of the Commission's Report, and will wonder why they have been allowed to become buried for so long. I can share Sir Ernest Low's spirit of hopefulness only in one respect: I still hope that India will not learn her lesson too late. (Hear, hear.)

Sir ALFRED CHATTERTON said that the paper before them dealt with a very complex problem, and there were some factors which would mightily influence the course of events which had not been discussed; probably they were deliberately omitted from consideration by the author.

He thought Sir Ernest Low had done useful service in the masterly contrast he had drawn between the conditions prevalent in India and in England during the period in which the industrial revolution had taken place in the latter country. The past had been very unfairly criticized in the light of present knowledge, and as English administrators and Indian industrialists would have to work together for many a year for the development of the country it was desirable that the people of India should have before them something more nearly resembling the truth than the garbled versions which were sedulously propagated as the history of the economic relations between India and England. Broadly, the artisans of India had benefited by the British connection, but the disappearance of a certain picturesqueness in the conditions under which they worked had been magnified into an irretrievable social disaster. It would be interesting to develop this point at length, but time did not permit, and he would only suggest, by way of illustration, that the goldsmiths, like the cotton weavers mentioned by Sir Ernest Low, had an abundance of raw material to work upon that hardly could have been imagined by their predecessors in the mythical "golden age" which never existed.

Coming to the question of the future of Indian industries, obviously the establishment of a stable currency and the extent to which protective tariffs would be used were factors which would greatly influence the course of events. He thought that at the present time India suffered from too low an exchange value of the rupee with the resulting high prices both for country produce and sterling remittances. But as Sir Ernest Low had avoided this thorny subject he would not go outside the range of the paper and raise it. He was in favour of assisting industrial development either by the imposition of tariffs or the grant of bounties, but he thought that India would pay very dearly for its progress unless the policy was framed on scientific lines and administered by a Board possessed of adequate scientific knowledge and equipped for this task with a wide range of technical and industrial experience. The dangers India was now exposed to were serious. Existing vested interests were very clamant, and there was an almost total lack of informed public opinion to follow intelligently the proposals now under inquiry.

He entirely agreed with the author as to the exotic character of the textile industries; in fact, he would go a good deal further and ask whether any of the modern industrial concerns in India could be regarded as yet out of the nursery stage. The reason of this was the neglect of mechanical engineering. The Indian was beginning to recognize the defect in his equipment, but as yet he had not made great headway in remedying it. Competition in more congenial ways of earning a living has driven the sons of the middle classes to a limited extent into the workshop and the technical school, but it was far too soon to express an opinion as to what

results were likely to follow. The commercial men of Bombay controlled very big industrial undertakings and showed no lack of enterprise, but they were still almost entirely dependent on foreign technologists. One would have expected that the wealthy Indian directors of the mills and factories in Bombay would have seen that their sons received a thoroughly sound engineering education which would fit them to control and expand the work already started. He thought, however, that few did so, and the sons when they were keen enough to follow in their fathers' footsteps almost invariably were attracted to the commercial side and were content to rely upon paid employees to control and manage the works. So long as this went on those who were interested in the material progress of India would, he thought, share the less optimistic views of their Chairman as compared with those set forth by the author of the paper.

Dr. SLATER said he would just like to ask one question. In the course of the paper the lecturer said that an increasing majority of jute mill shares were in Indian hands. When he was in Calcutta and inquired about that very point, he had been told it was impossible to get the facts, and he would be glad to have any authoritative information on that question.

The general problem dealt with in the paper was undoubtedly very difficult indeed to deal with. Personally, he felt very much that before any great things were likely to be accomplished by Indians, the Indian attitude towards life generally would need to be altered. He thought that such a change was coming very gradually, and it was from that changed attitude towards life as a whole they might expect a gradual development of that intervening class between those who were trained to think without ever working with their hands and those who were limited in their activities to manual work. India wanted a class of people who used both their hands and their brains. There was really little innate racial difference between the young man in Madras and the average Englishman, but much difference due to social training. In most respects a young Indian boy was surprisingly like an English boy, but with a very different social training; as he grew older the differences developed.

Then, turning to another aspect of the matter, he thought that Lord Morley did a very great injury to India in stamping in 1911 upon the Madras Department of Industries, with the creation of which Sir Alfred Chatterton was so closely connected, while the Madras policy was vindicated by the Indian Industrial Commission. He also felt that even the Madras Department of Industries when it took up certain particular industries did not get the fullest educational advantage out of them. For instance, when they took over a pencil-making factory and turned it into a lucrative concern, they straight away sold it to a private trader, whereas the idea should have been to show the people of India how to run a thoroughly well designed and well administered business, and not merely how to make pencils. Under the new Constitution his experience on the Finance Committee of the Madras Legislative Council made him fear that the Department was in the position of being the plaything of political party, although this led rather to money being squandered than too much stinted, as the party in power regarded the Department as being a good electoral card to play. He felt that in many matters India was running a serious danger through what had been regarded by many exponents of Indian opinion as a too slow development of constitutional liberty, but what he was rather disposed to think was a too rapid development towards so-called "democracy" and "self-government." The introduction of party politics and representative government was a great social danger in regard to the relations between Government and industry, and the situation was one which he could not view without considerable anxiety. (Hear, hear.)

Sir FRANCIS SPRING said that, not having come prepared to criticize Sir Ernest Low's very interesting paper, he felt diffident in offering a few remarks after the illuminating comments on it that had been made by Sir Thomas Holland, Sir Alfred Chatterton, and Dr. Gilbert Slater. He hoped, however, that his extensive experience, during nearly half a century, of Indian industrial conditions might be accepted as justifying the few and desultory remarks that he proposed to offer. He would like to sketch briefly the story of two of his personal friends—one in the lower or labour grade, and the other in the higher or directional grade, of industrialism—as examples to young Indian men of what was open to them, whatever their social status.

The first of these was his friend of forty-five years—now, alas! lately deceased—Alla Din, blacksmith, of Kotla Loharan di, Sealkot, Punjab, who before his death had had the coveted title "Khan Sahib" conferred on him by the Government. In designating Alla Din as a blacksmith, he meant it to be understood that he was a skilled worker in metals, equally ready to tackle the making of a mother-of-pearl-handled penknife as the erection of a 500-ton steel girder for a railway bridge. The descendants of many generations of humble metal-workers, his people had been gun, sword, and shield makers in Sikh times, prior to 1849. Then, under the guidance of English engineers, he and his fellows swarmed out from their village, and the latter were now to be found in numbers in the railway workshops and wherever intelligent manual skill is demanded. In due course, Alla Din, rising, as he told me, from twopence per day, became the most important directional Indian on the late Mr. F. E. Robinson's great cantilever bridge over the Indus at Sukker, near which the biggest irrigational barrage in the world is now beginning to be made. From there he came to help the speaker and other engineers on the structural steelwork of one large structure after another until 1906 or thereabouts, when he began contracting with him for the erection of, and did successfully erect, some fifteen acres of steel warehouses, as well as some screw-pile and other structures for harbour work, at an agreed price per ton. Near the end, during the War, he ran successfully and well his own small factory with about 300 men, making quite a large tonnage of such small steel-work as bits, curb-chains, stirrups, spear-heads, buckles, and mule saddles for the military authorities in Mesopotamia. The speaker's old friend was a truly devout Muhammadan and an upright and reliable man, and it may be hoped that his four fine sons, like their father, practical men, but unlike him educated on modern lines, may be found following in his steps, and contributing their share to the development of their country.

The second story he wished to tell was that of a friendship not of forty-five, but of thirty years' duration. In or about the year 1892 some pressure was brought to bear on the speaker, by persons of influence, that he should accept as an apprentice on a big work he had in hand a young man, Mr. V. Rangaswamy Aiyengar, son of a well-known and highly respected Judge of the Madras High Court. Thinking it very unlikely that the son of a Brahmin lawyer would take kindly to practical outdoor work, the speaker at first refused to have him; but, later, consented on learning that the young man, resisting the persuasions of his family to enter the legal profession, had passed through the Madras Engineering College—of which Mr. (now Sir Alfred) Chatterton was then Engineering Professor—and had gone through a practical course in a railway workshop. That, when accepted by the speaker as an assistant, he proved an intelligent, keen, and useful one may be guessed from the fact that, later on, he became the Chief Engineer of Mysore, a native State with thirteen million population. [Sir Alfred Chatterton: Now Director of Industries, Mysore.] This example proves that even from the "politically minded"

classes there may be evolved captains of industry, under suitable conditions and training. It may be difficult for stay-at-home Englishmen to realize why such should *not* be the case. But "East is East," and the influence of the hereditary idea and of caste environment is tremendous, and it takes an exceptionably self-reliant young man to break away from it.

Notwithstanding the well-known dislike and contempt of the "*Budro log*"—small gentlefolks—of Bengal of anything savouring of manual industry, involving the exchange of the black alpaca coat for a blue dungaree overall and the fountain pen for a spanner and chisel, this very class, and the literary class, were to be found, in growing numbers year by year, coming to the Seebpore and other industrial colleges to be taught the use of their hands, to make and read a drawing, and to learn something of the principles involved in structural work. A considerable and growing number of these young men find adequately remunerative careers in workshops, coalfields, mills, and factories, as well as in municipal water-works, on the river steamers, and so on. Men of a similar class, though not nearly in the numbers desired, come for instruction in pure and applied chemistry and electricity to the Indian Institute of Science, Bangalore. So far as it goes, all this is to the good; the outlook is improving surely if slowly, and the prospects of obtaining the necessary directional supervision of industrial enterprise are becoming better as the years go on. But the young man who comes from a cultured Indian family has to fight against æons of hereditary prejudices if he wishes to take a share in the actual making of wealth instead of attracting some of it to himself with, for his tools, tongue, pen, and paper.

Many of India's industrial wants consisted of small things, though comparatively large in quantity, quite capable of being taken up by small Indian capitalists. Thus there was the lead-pencil industry, the making of paper, the rolling of steel bars of small section, and so on. Indeed it was probably little known that quite the largest use for small bar iron and steel in India was for the universal bullock-cart tyres and axles and for bullock shoes. With a little more enterprise, some more practical knowledge, and a great deal more of mutual confidence, small factories might be expected to spring up, all over the country, for the making of innumerable things for which money must now go away to Belgium, Germany, and Japan. As examples of work of a higher class they had the Cossipore shell factory, where, under European supervision, first-class work was turned out. The speaker had been told that the Ichapore rifle factory had not been equally successful. [Sir T. HOLLAND: It has proved a great success.] The speaker was very glad of Sir Thomas Holland's correction because he could never see why that factory should have failed.

Miss M. SORABJI said that the great mistake in the past had been that education in the schools and colleges had been far too literary.

If the people of India were taught to value and understand the benefits to be gained from training in handicrafts and industries, and if strong public opinion could be created upon the subject, the material progress and prosperity of the country would, undoubtedly, be greatly advanced, but (as had already been said) their attitude towards life would have to be entirely changed.

Personally, she would regard it as a very grave loss to India were her genius for religion to disappear. It was her greatest asset, and if robbed of that she would be robbed of her most priceless treasure. But, if India must live and prosper—as she must—in a *material* world, her people must learn that it is indeed an honourable thing to work with the hands.

If more of her sons would give up thinking of the law and literary professions and go in for industrial and technical careers it would be for the

good of India, but above all, and beyond all, she must preserve that spiritual instinct which was her noblest heritage. (Hear, hear.)

Mr. H. KELWAY-BAMBER said that as a former Superintendent of Rolling Stock on the East Indian Railway he had been much impressed with the skill and capacity of workmen drawn from most of the Provinces in India. He had also always recognized the importance of providing a suitable training for candidates for the higher posts on railways, and so long ago as 1905, with the approval of the Board of Directors, had instituted in the workshops of the Carriage and Wagon Department of the East Indian Railway at Lillooah a scheme for training the sons of Indian gentlemen under precisely the same conditions as those applying to English pupils and apprentices on British railways.

The scheme, which made provision for fifty youths, was attended with much success. It has since been extended, and has been taken up on other Indian railways.

Many youths thus trained were coming to this country for further technical experience under British railway conditions, and also to supplement their theoretical training in the Universities. Quite a number of these lads had been under the speaker's personal supervision. They had shown great interest in their work, were well behaved, and, indeed, often set a good example to British youths training under the same conditions. He realized that there were many difficulties in the paths of young Indian gentlemen coming to this country for training; some of them were very lonely, and had not, perhaps, the opportunity of meeting the right people. In the north of England they had done their best to help them in every way, and he felt it his duty to come to that meeting and to say that they were worthy of every encouragement.

He regretted to hear that prospects of Indian industrial developments were not at the moment very hopeful, but whatever the difficulties might be, from a commercial or financial standpoint, he had every confidence that, given fair, firm, and sympathetic treatment, Indians, whether as workmen or superior officers, would in time satisfactorily meet any demand made upon them.

The LECTURER, in reply, said that he was one of those old-fashioned people who thought that the retired Indian civilian ought to keep himself aloof from politics, and in the paper he had tried to do so. The politician's powers for evil were limited, because he could not in the long run interfere with natural development and with economic forces.

With regard to the query as to the number of shares held by Indians in the jute mills raised by Dr. Slater, who said that when he asked he was told that inquiries were inconclusive, he would like to say that when he asked the same question the reply was quite different. The original inquiries indicated that rather more than 50 per cent. of the shares were held by Indians, but later it was found to be about 60 per cent. He had quite recently been assured by a competent authority that the same process was still steadily going on.

With regard to Sir Francis Spring's comment as to the possibilities of industry in regard to such things as bullock shoes, etc., it was typical of a lot of small handy articles which could be manufactured on a small scale, and was by no means to be despised. But he hoped that they might sooner or later be able to start industries that would do away with the bullock cart altogether.

He had been very much interested to hear the remarks made by the gentleman who came from the north of England about Indian apprentice students in England. A lot had been said about their being idle and getting into trouble; but he would like to ask what sort of a showing a young English lad would make if he were sent out to India, say, at the age of nineteen, with plenty of money, and in a position to attend or not attend at the works as he pleased. (Hear, hear.)

In conclusion, he would like to say that, whatever political ideals actuated England or India, it was clear that this country could not afford to have India running along on the low, dangerous level that she was doing at present. If they could only raise India up to a decent industrial level, she would be a much better customer than was even Germany in the year 1914. It was a serious thing for this country to have lost for the time her Continental markets, but there was no reason why with proper organization in India the tropical markets of the world should not become as important to England as the European markets had been in the past, and even more so when one considered their enormous size and their population. (Hear, hear.)

The HON. SECRETARY proposed a hearty vote of thanks to the Lecturer and Chairman.

The CHAIRMAN replied, and the proceedings terminated.

MR. ALFRED DICKINSON, Engineer, writes from Birmingham :

DEAR SIR,—From 1905 to 1917 I was investigating the possibility of developing the Western Ghats for the generation of electrical energy and in the construction of the Tata hydro-electric system.

During this period I was brought into close personal touch with the best business brains in India, and I took the opportunity of making a close study of the industrial resources of that country.

I mention this simply to show that any opinions I have formed were not founded, as is often the case, on a three weeks' visit to India.

As I have not had an advance copy of the paper, it is impossible to express an opinion thereon; therefore, I can only state my views in general terms.

One of the very essentials in the development of industry in India, or in any other country, is cheap power.

Cheap power is, of course, a relative term, and is of more importance to some industries than to others.

What is cheap power to a producer of textiles, or to a mechanical workshop, might be a prohibitive cost to many other industries, such as the manufacture of aluminium and the smelting of iron or steel in electric furnaces, but there are such enormous resources of water-power in India that power could be generated and sold at such a low price as to justify its use for producing electrically from the abundance of raw material in India aluminium, iron, steel, electro-chemicals, and many other commodities.

For some time I have been endeavouring to induce manufacturers in this country of some of the above commodities to establish works in India for their manufacture.

From these discussions I cannot help feeling that the natural resources of India are not only little understood, but that an appreciation of the internal possibilities of a rapid industrial development is very small.

Most of the manufacturers think of India as a country in which to hunt tigers, but a few of them are beginning to realize that iron and steel are actually manufactured there.

The sooner there is a full appreciation of the mineral resources of India, and that India is a part of the British Empire, the better it will be for the general advancement of the whole of the Empire.

The process of industrial development in India must be one of evolution, and my view is that if manufacturers and financiers in this country would only realize that by a combination with the Indian most of the raw material necessary for the various manufactures can be produced in India and turned into finished articles by the more skilled workmen in this country it would be a good thing.

CORRESPONDENCE

"INDIA'S WORKING CLASSES"

I HAVE read Mr. K. C. Ray Chowdhry's interesting paper on "India's Working Classes and their Problems." Mr. Chowdhry is an educated Bengali, and no doubt owes all his education to Western training. He poses as a champion of Indian labour, and from his description of the conditions of native labour throughout India one could quite justifiably draw the conclusion that the employers of labour in that country, both native and European, are slave-drivers of the worst description.

I propose to take the various classes of labour in the order in which he deals with them.

Let us take the Bombay cotton mills. Mr. Chowdhry gives the interesting information that more than 90 per cent. of the shareholders are Indian. Here, at all events, the charge cannot be laid that native labour is being exploited by the Westerner for the benefit of English shareholders. The conditions under which the operatives in the Bombay cotton mills work lie in the hands of the Indians themselves.* This, of course, is not an answer to the general charge that native workmen are underpaid and overworked, but it does suggest that Mr. Chowdhry should make an effort to educate his own people before going farther afield.

The following expresses the views of one who is well qualified to speak on the subject of tea-estate management:

"The exodus of tea-garden labour from the Chargola Valley was the result of the activities of political agitators who induced the workers to leave their work and then left them stranded. No provision was made for their return to their homes, and even if they had got home there was nothing for them to do when they got there. Many of them died as the result of an outbreak of cholera, and but for the assistance rendered by Government the disaster might have been much worse. Many of the coolies eventually found their way back to the gardens, where they have settled down quite happily. The whole business was not the result of any desire to better the lot of the coolies, but was a blow aimed at European enterprise and was purely political in its aim. The European tea-garden manager, recognizing the value of a contented labour force, treats his coolies with every consideration, and I believe that the tea-garden coolies on the whole are perfectly contented, and are much better off than they would be in their own country. Many of them after working a term on a tea garden settle down on waste lands outside the garden boundaries and become cultivators on their own account. Their statutory wages on the garden are for a task which can be accomplished in a few hours and can be largely supplemented by working on extra tasks. It is wrong in my opinion to suggest that coolies prefer Indian gardens to European gardens. That has not been my experience. For one thing, the coolie is not always sure of his wages on the Indian proprietor's garden, which is not always managed on commercial lines. I am glad that Mr. Chowdhry admits that the garden coolie receives many benefits in addition to his wages, such as free housing, medical attendance, cheap rice and clothing, grants of land for cultivation, etc., which he is well within the mark in valuing at Rs. 1 per month."

Regarding the above statement it might be pertinent to inquire what the tea-garden worker lacks, seeing that he gets free housing, free medical

* I think it will be found that the conditions under which the Bombay cotton-mill operative works, under Indian control, are infinitely worse than those obtaining under European control.

attendance, cheap food, cheap clothing, and free land to cultivate, in addition to his pay for a few hours daily on a light task. Mr. Chowdhry properly explains that the tea-garden workers are drawn from what he is pleased to describe as "backward classes" (Sonthals, Bhils, and similar semi-aboriginal communities). When it is explained to the Westerner who has never travelled to the Orient that these tribes in their native state are little removed from savages, that the Sonthal is a born hunter and lives by his bow and arrow, it will be seen how premature it is to suggest anything in the shape of trade unions on the lines adopted by a civilized community. As a matter of fact, the great difficulty in dealing with all native labour is to see that the payments made really reach the worker, and that he is not unscrupulously exploited by the educated Indian. The Bengali is one of the worst offenders in this respect, and Mr. Chowdhry, who ought to know his own fraternity if his Western education has not blunted his knowledge of his own community, must be well aware of this simple truth. The Indian worker may in some few cases require protection from his European employer, but the need for protection is infinitely greater in respect of his own countrymen partly or wholly educated.

An authority on jute mill management writes as follows:

"I believe the system of shifts is preferred by the labour in jute mills; at all events, I have known strikes to have resulted from a suggestion on the part of the employers to revert to the single shift system. A number of mills are now working on the single shift system, and this system would, I believe, be more generally adopted if it were not for the objections on the part of the worker. The mills are at present working short time—not from choice on the part of the employers, but because they are forced to do so by trade depression. It is obviously better to work a mill short time than to close down altogether. To ease the lot of the workers the employers pay them a *khoraki* or food allowance in respect of the days there is no work. This does not connote any lack of consideration on the part of the employers."

As regards labour at the mines, the writer had long experience of the conditions at the Indian collieries in Bengal. Mr. Chowdhry states:

"In the first place, the peculiar nature of underground work, especially in a tropical country like India—viz., absence of light and ventilation, dampness, the inhalation of noxious fumes coming from the kerosene of the miner's lamp, the heavier atmospheric pressure in the mines—all these tell on the health and mind of Indian miners of both sexes much more than on those of the underground workers in non-tropical countries. . . ."

It would be difficult to pen a greater distortion of the real facts. Coal-mining conditions in India compare very favourably with mining conditions in any other part of the world. The seams are thick, anything from 6 feet to 78 feet, the angle of inclination is in almost all cases easy, and the seams are at no great depth. In fact the Indian coal seams appear to have been deposited by nature specially to suit primitive native labour. The atmosphere in the Indian pits is wonderfully good in all well-managed mines—the temperature cooler in the hot weather than the surface temperature, and warmer underground during the winter months. It is possible that Mr. Chowdhry may have obtained his experience from inspection of a native-owned colliery. Most of the opposition to necessary and carefully thought out mining regulations has in the past come from the native colliery proprietor. Medical statistics will show that in point of health the colliery population will compare favourably with any community in India. In this respect a parallel may be found in the health statistics of the colliery districts in the United Kingdom. Coal mining is recognized as a healthy occupation, excluding the risks inseparable from

mining operations. The risks run by the Indian miner are infinitesimal compared with the British worker. Gas is not common in Indian seams, and accidents which have happened in the past have been due mainly to faulty management.

The curse of the coal fields lies in the disastrous epidemics which annually take a heavy toll from these districts, and these epidemics invariably have their origin in a contaminated water supply. Large sums of money have been spent by the principal colliery owners in the endeavour to provide a filtered water supply to the workers, but the ignorance of the native worker, his superstition, and his adherence to tradition and custom too often nullify every effort made to preserve him from the ravages of cholera, smallpox, and other diseases of dirt and careless living. Many instances could be cited of the colliery worker preferring the green slime of an Indian tank (pond) to a piped and filtered water supply.

Mr. Chowdhry is correct when he says that the native miner is addicted to drink. In this respect there is a remarkable similarity between him and his Western confrère. These semi-barbarous native tribes insist on having their own particular cordial or "toddy." The Government of India recognize this insistence and take particular care to see that the drink is pure and unadulterated. Perhaps one of these days Mr. Chowdhry will bend his energies in the direction of a campaign in support of native Prohibition. He will be able to count on the support of every European in the country.

The Indian miner is now making so much money that he refuses to work more than three or four days a week. It is true that he does not save this money. He spends most of it in drink, but if the price of native liquor were still further raised by a paternal Government, might this not be taken as a grievance and an unnecessary suppression of native idiosyncrasies? Mr. Chowdhry deplors the absence of a home life for the Indian miner, due, he alleges, to the wife accompanying her husband underground. Has Mr. Chowdhry ever suggested to an individual Sonthal the desirability of his leaving his wife above ground? It is clear that the case is not complete until we have the Sonthal husband's views on the subject.

In this connection it is interesting to note that the question of the employment of women in mines has recently been the subject of an exhaustive inquiry conducted through the agency of the Mining Association in Calcutta. The following is an extract from a letter addressed to the Government of Bengal by the Secretary of the Indian Mining Association, dated October 29, 1923:

"There have been developments recently which affect the position and indicate that it would not be wise to force the pace unduly. Hitherto no effort has been made to ascertain the feeling of the labourers themselves on the question, the discussion, so far as the industry is concerned, having so far been limited to employers. In view of the importance of the matter to the labourers themselves it seemed expedient to make some inquiry as to how they regarded the proposed prohibition of the employment of women underground, and for this purpose series of simple questions were prepared on which colliery managers were asked to obtain the views of their employees. The result of these references to the labourers is very striking. Some forty sets of answers have been collected, these having been given by several hundred representative employees in the different collieries. It appears that the labourers are not generally aware yet that after July 1, 1924, the employment of children in the mines will cease; only a few of them have heard of it. Similarly only a few know that there is a possibility of the employment of women underground being prohibited, and the great majority are opposed to such prohibition,

while those who agree with it usually qualify their agreement by making it conditional on an increase in rates. The women especially are alarmed, and many of them state that they will starve if they are not allowed to work, particularly those who are widows or unmarried and are thus dependent on what they can earn. The work done by the women is the carrying of the coal cut by the men and the loading of it into tubs, and the men clearly view with dissatisfaction the possibility of their having to do this work themselves. Some, indeed, state that they will not work under the new conditions, or that they will work only on the surface, or only if their wages are doubled. Answering the question if they are satisfied to have their wives working with them, the men are practically unanimous in saying they are. Similarly, the women are practically unanimous that they are satisfied; out of replies representing several hundreds of women, only twelve being in the negative. In several cases comments are made such as, 'It is better than surface work, as there is neither rain nor cold'; and 'We cannot get other work in this district, and also won't get so much pay.' There is, on the part of both men and women, a strong and definite opposition to any change in the conditions; and it is quite clear that, if the working of women underground is prohibited in the near future, there will be great difficulty in persuading the men to go down. Some say they will go back to their villages, or take some work where their wives can work with them; and in many cases, where willingness to work is stated, this is made conditional on a considerable increase in wages."

The Mining Association incline to the opinion that the time must come when the employment of women in mines should be prohibited, but only after a full reconsideration of the subject as to the date from which the employment of women should cease.

The following note has been handed to me by a high official of the East Indian Railway:

"I return you proof copy of Mr. K. C. Ray Chowdhry's paper on 'India's Working Classes and their Problems'; and I understand you wish me to remark on the statement that Anglo-Indians are given exceptional treatment, and that the European superiors foster baneful ideas of their race superiority over the native, and that it was this feeling which led to the assault on the native firemen at Tundla.

"My answer to the first part of this statement is an emphatic denial on the part of the East Indian Railway. No appointments are reserved exclusively for Anglo-Indians—I suppose the term is used in the widest sense, including Europeans appointed both in India and England—and so far from this being the case, the railway administrators have been doing everything possible to train Indians in the different departments of railway work to fit them for superior appointments.

"As a matter of fact, we have now got thirty-seven Indians holding responsible posts in the supervising grades of the superior establishment; and there is no reason why any of these men should not rise to the top of the ladder, provided they show the necessary capacity and administrative ability for such a position.

"With regard to the statement made that it was the spirit (of self-respect) among the Indians which caused the strike, if he means to imply that the strike was caused by a resentment against the spirit of race superiority, which he alleges existed, I have no hesitation in again replying with an emphatic denial. The strike was without any doubt caused by the machinations of the emissaries of the non-co-operative agitators, who went about in the most open way among the railway staff for the avowed purpose of creating a spirit of hatred, and in consequence a strike. The incident of the assault on the fireman at Tundla was an obvious pretext, and it may be doubted whether the fireman was in fact really assaulted."

As regards the employment of Lascars on board British steamers, it is hardly necessary to go into this matter in detail. Anyone resident in the United Kingdom is at liberty to study the subject for himself first hand, by visiting any of the principal British ports and interviewing the men themselves. Lascars are well cared for, and are a particularly happy class, willing and obliging.

It may be asked, What has the British Government in India done to protect the native worker? The answer lies in the numerous Factory Acts, Mines Legislation, Labour Recruiting Acts, and a host of other enactments on the Indian Statute Book. Many of these statutes are sound; a few, introduced by pressure brought to bear by powerful competing interests in the United Kingdom, make the task of the employer of Indian labour full of difficulty, and in many cases are directly opposed to the interests of the Indian himself, run counter to his habits and customs, and are in consequence calculated to defeat the very objects for which they were ostensibly framed. Nor is this legislation recent. Most of the Acts go back for at least a quarter of a century—long before the native political agitator was dreamt of!

There is a wide distinction between the worker of the East and his confrère of the West. The unit of labour in the East is the family—in the West, the individual. It is a common sight to-day in any town in India to watch the native bricklayer place the bricks in position which his wife or another coolie woman has carried up to him. On the tea gardens and at the collieries whole families apply for work. And while no doubt the ideal to be aimed at is the exclusion of women and children from arduous tasks, the process must necessarily be a slow one, and must be effected with the co-operation and assent of the Indian male worker himself. Education will in time effect vast changes in India. It is doing so to-day. The political agitator is one of the unhappy results of too intensive a course of education. Shallow draughts of the Pierian Spring have intoxicated the brains of many of India's would-be regenerators, but it would be not only charitable but true to regard this merely as a phase in the evolutionary tide of knowledge. Mr. Chowdhry's efforts on behalf of the Indian workers are not very inspiring if we are to judge him by the address to which this is a reply. His statements are made up of half-truths bearing the impress of thinly veiled malevolence. This attitude is not calculated to promote the true interests of the Indian worker, and will certainly make the self-imposed task of the British Raj infinitely more difficult.

H. H. MACLEOD.

December 5, 1923.

[The expression of divergent views is always welcome. I believe, however, that Mr. Chowdhry (who has left for India) had no intention of attacking European employers in particular. On the contrary, he admitted to me that the whole movement in favour of Labour was inspired by European ideas.—S. P. RICE, *Secretary, East India Association.*]

"INDIAN PRISONS AND THE INDIAN PRISON COMMITTEE"

As Sir Alexander Cardew did not in his reply refer to my question about torture in Indian jails, I ought, perhaps, to explain that it was based on frequently repeated complaints in "Young India," especially that of September 20th last, as to specific cases of real torture. Sir Alexander assures me that the Commission had no evidence of any real brutalities, and it is difficult to believe that they could occur nowadays: but surely such public allegations should be thoroughly sifted, and due notice of them taken if unfounded.

J. B. PENNINGTON.

THE OPIUM QUESTION AND AMERICA

BY JOHN CAMPBELL, C.S.I.

THE rapid extension in America of the abuse of drugs has attracted attention to this important social problem ; and the American Press has, during the past nine months or so, devoted a very large amount of space to discussions dealing with all aspects of the question. In general, these discussions indicate an honest desire to get at the facts of the case, to find out exactly the nature and extent of the evil, and to devise the best means of combating it. But unfortunately the whole of the American Press has not approached the subject in this manner ; there can be no doubt that in some cases the social and humanitarian aspects of the question have been entirely subordinated to other considerations ; the discussions have been given, quite gratuitously, a strong political bias ; and not infrequently it is only too obvious that the intention has been, not to aid in the solution of an urgent and important problem, but to broadcast statements which are usually inaccurate—and are often grotesquely so—with the object of vilifying England and India. These statements are, in general, so damaging, so obviously false, and so readily susceptible of disproof, that it is difficult to resist the conclusion that they have been deliberately made with the sole object of waking a strong popular feeling against the Governments of Great Britain and India. One of the largest New York papers charged India with producing over 600,000 tons of opium each year, “with which to drug the world”: the actual production of British India ranges about 800 tons. This section of the American Press holds India directly and immediately responsible for the production of the opium from which the morphine and heroin used by drug addicts in America is made : as a matter of fact no Indian opium goes now, or has ever gone, to America.

In view of this campaign of misrepresentation, it is of primary importance to state the essential facts of the

problem as clearly and concisely as possible. These facts are : (i.) India does not export opium to America, nor has she ever done so. (ii.) India does not export opium to countries on the American continent in any but the most trifling quantities, and at very irregular intervals. (iii.) The laws in force in America are so drawn that Indian opium is now, and has for many years been, excluded from America, inasmuch as it contains less than the prescribed percentage of morphine. (iv.) India does not export opium to England, or to any other country, for eventual re-export to the American continent ; and no Indian opium does in fact find its way to America by any channel whatsoever, except possibly such trifling quantities as may be smuggled by the crews of ships trading between Far Eastern ports and ports in the United States. (v.) India does not now, nor has she at any time, exported dangerous drugs such as morphia, heroin, cocaine, etc., to America, either directly or indirectly. All these statements are readily verifiable. It follows from them that India cannot be regarded as in any sense a source of supply of opium, or of dangerous drugs, either for legitimate use or for abuse in America. But the facts stated above, cogent as they are, do not give a complete presentation of the position ; nor do they bring out adequately the more comprehensive safeguards which India has created.

To do this, it is necessary to sketch, in rough outline, the general measures which the Government of India have taken to protect all countries, including America, against the possible danger of receiving opium, produced in India, in excess of their ascertained and legitimate requirements. India has given a formal undertaking that she will not allow any opium to leave her shores for export to any particular country, unless the Government of that country certifies that the opium so to be exported is required for legitimate purposes. So far from pressing its opium on any country, India requires, as a condition precedent to export, that the importing Government must satisfy itself that the quantity asked for is reasonable ; that Government must certify that the opium is required for legitimate purposes ;

and must assume the administrative and moral responsibility of seeing that the opium imported is not in fact employed for purposes of abuse. With the object of emphasizing and pressing home this responsibility, the Government of India have for several years steadily pursued the policy of selling their opium, so far as that was possible, direct to the Governments concerned; they felt that in this way the responsibility of these Governments for controlling the use to which the opium was put was made clearer, more direct, and more public. As the result of steady perseverance in this policy, India now sells roughly three-quarters of her total exports of opium direct to responsible Governments; but it is important to remember that, as regards the balance of approximately one-quarter, the control of the importing Government remains absolute and unimpaired. The Government of India probably hoped that the adoption of these arrangements would disarm their critics, but they underrated their ingenuity. There is still a party, small perhaps but very vocal, which urges with vehemence that the system is entirely unsatisfactory, inasmuch as it is left to the importing Governments to decide what quantities of opium they shall import, and to determine what construction shall be placed upon the word "legitimate." This contention is, it may be noted in passing, not strictly correct, for the Government of India, while naturally averse for obvious reasons from challenging the accuracy of a certificate issued by a responsible Government, has in fact refused to allow exports in cases where it was thoroughly satisfied that the certificates produced were unreliable. The major contention, however, remains; analyzed, it seems to amount to this—that the Government of India should set up in business as the moral mentor of the world in respect of the drug traffic. It is for India, the critics say in effect, to determine what quantity of opium a particular country needs, and to determine also what is "legitimate" use in that country. This proposition has only to be stated for its absurdity to become manifest. The writer recollects discussing the point with a distinguished American, now a Senator, who agreed that India had done everything possible,

everything that anyone could reasonably demand of her, up to a point; but he asked why she should not take the final step and ration the world. It was put to him that the adoption of such a policy would be tantamount to saying in effect: "We mistrust the certificates signed by other Governments. We doubt whether they have the information, or the ability, or possibly the honesty of purpose, necessary to handle this problem. We, a foreign Government, with practically no sources of direct information open to us, propose to take it out of their hands and decide it for them." He agreed that this was a fair statement of the essential point involved, and his opinion as to the reception likely to be accorded to such a policy in America was emphatic and unequivocal.

Apart from considerations of national dignity and international courtesy, it is obvious that it would be wholly impracticable for India, or for any other country, to attempt to decide what quantity of opium or dangerous drugs any particular Government should be allowed. So far as the writer is aware, no country has yet solved that problem satisfactorily, even for its own territory; to solve it for another country is absolutely impossible, with the machinery now available and in the conditions which now exist.

So far as the opium traffic of India is concerned, America would therefore seem to enjoy the maximum degree of protection possible against the occurrence of any abuse. India sends her no opium; and India sends out no opium at all unless a responsible Government certifies that that opium is necessary for its legitimate purposes. In other words, India has done everything possible to prevent the formation of any pool from which opium could be smuggled to illicit destinations. If such smuggling of Indian opium does exist, it can only exist in virtue of excessive demands made on India by dishonest or incapable Governments, demands which the Government of India cannot reasonably reduce until it is in a position to satisfy itself, on clear evidence, that the quantities asked for are, in fact, unduly large. As already stated, it does not hesitate to reduce such demands when it is so satisfied; but the course of the

export trade during recent years suggests that abuses of this nature seldom occur. Within the knowledge of the writer, a close study of the subject for several years has led to the accumulation of convincing proof as against one Government only, and to the formulation of a case of strong suspicion as against one other Government.

The policy and practice of the Government of India having now been explained in the roughest outline, and the fundamental facts as regards the position of America having been stated, one is in a better position to form a reasoned opinion on the main contention of the American Press, which is that the drug evil must be attacked at the source if successful results are to be obtained. Briefly, the suggestion is that the production of opium, and of the coca leaf, must be limited by means of some effective machinery to the quantities necessary for medical and scientific purposes. This proposal has, admittedly, an alluring simplicity; there is an attractive "root and branch" vigour about it likely to commend it to the average man, who rightly feels that something effective must be done at once to end an abominable traffic; and it has an air of administrative feasibility calculated to disarm criticism of the more technical kind. But it bristles with fatal objections, and the simplicity is unfortunately apparent only.

In Europe and America the problem is solely a *drug* problem. There is no abuse of opium, and there is practically no consumption of opium except for unquestionably legitimate medical purposes. But, throughout Europe and America, there is now undoubtedly a widespread abuse of drugs. The "bottle-neck" of the system does not lie in the producing countries, where poppy or coca leaves are grown, but in the manufacturing countries, where the only drugs used by America and Europe are produced. Cocaine, for example, is made in a very few factories, all of which are definitely marked down, from coca leaves grown principally in the Dutch Netherlands and in Southern America; morphia, heroin, and the allied drugs are manufactured from opium, again in a very few factories, all of which are known. The fabrication of these drugs is a difficult

business, requiring skilled control, suitable and delicate machinery, and long experience. Further, the trade is concentrated to a quite remarkable degree. In Great Britain there are only three factories which make morphia and its derivatives; in America there may be as many as ten or fifteen factories for the whole country, but several of these are comparatively unimportant. Probably the whole of the cocaine factories in the world could be counted on the fingers of one's two hands. Here then, indubitably, is the "bottle-neck" of the business. Control these factories adequately, and you control morphia, heroin, and cocaine at the real source. You cannot control at the physical source—the country where the raw material is grown—for various reasons. In the case of cocaine, for example, the percentage of extractable drug in the leaves varies enormously in different conditions; it would, in the opinion of competent chemists, be impossible to say that so many acres would produce so much of the pure drug. Further, who is to determine to what extent production shall be reduced, and what share is to be retained by Peru or Holland of the truncated trade? There is no authority with power to allocate to the various countries their share of the total production which might finally be decided on, and there seems no likelihood of having these quotas fixed by agreement. The position in respect of opium is very much more complicated. The poppy is grown by a large number of countries; several of these are not signatories of the Hague Convention; some of them, though signatories of that Convention, do not, in fact, possess either the will or the power to render effective any decisions which might be arrived at as to the limitation of production; and the situation is still further complicated by the fact that most of the producing countries, with the exception of India, have no statistics of any value as to the crop. China, which probably grows over 80 per cent. of the total world production of opium, officially prohibits the cultivation of the poppy. Can it be imagined for a moment that in these circumstances "limitation at the source to the amounts required for medical and scientific purposes" is a practicable policy?

Would Afghanistan be likely to agree? Would Persia and Turkey accept and carry out efficiently the decisions of an International Conference as to the limitation of a crop which has in the past constituted one of their chief sources of revenue? And what about the 80 per cent. of the world crop grown in China? It is true that China's exports have not hitherto been large; but the enormous, and wholly illegal and uncontrolled, production of opium in China is now a menace to the world. Control of the production of coca leaves and of opium at the source is an entirely impracticable proposal in the world as it exists to-day. The power to impose a solution, the will to carry out that solution, the administrative machinery necessary, the statistics requisite to enable the problem to be stated and solved, are all alike lacking.

There is another fundamental difficulty inherent in the suggestion for control at the source. Before there could be even the semblance of such control, a new international agreement, extending, varying, and amplifying the Hague Convention, would be essential. Now it took exactly nine years and a world war to render the Hague Convention fairly generally effective. Despite the pressure which could be exercised, and was in fact exercised, under the various peace treaties, Persia still stands outside the Convention; and Turkey has only agreed to come in under the recent Lausanne Treaty. It would be unduly optimistic to expect anything in the nature of close control in Turkey for many years to come; there is no prospect of obtaining any control either in Persia or Afghanistan; and, as we have already seen, China is white with poppy although that crop is legally prohibited there. India, Turkey, and Persia are probably of approximately equal importance as exporters of opium; Afghanistan supplies a considerable but much smaller quantity; and China's present exports are unascertainable, though it is known that they are large enough to embarrass seriously the Governments of Hong-Kong, Burma, and Indo-China. Were the proposal for control at the source carried, the obvious result would be that, while India would scrupulously carry out any engagement she

might enter into, there would, in fact, be no reasonable prospect that the effective collaboration of the other countries concerned could be obtained. The burden would fall on India, and on India alone. Nor would the world at large be benefited, inasmuch as there is ample land available suitable for poppy cultivation, and under the control of countries which would either refuse to enter into any engagement on the subject, or which could not as a matter of experience be depended on to implement any such engagements which they might undertake.

The essential thing is not more international engagements, but rigid honesty and sound administration in respect of the engagements already concluded. There is, however, a very natural human tendency to think that a matter can be settled by passing an *ad hoc* law on the subject; and that tendency has, perhaps, been more apparent on the American than on the English side of the Atlantic. America passed a law in 1909 which enabled her to appear at the Shanghai Conference "with reasonably clean hands." The quotation is from an American authority on the subject. But, despite her quite excellent law, America did nothing to put it into effect for nearly thirteen years. She denounced the iniquities of the traffic; but she entirely failed to use the weapon, ready forged and lying in her arsenal, which would have been amply sufficient to enable her to remedy the evils of which she complained.

She has still weapons fully adequate to deal with her present situation, but the popular cry is not for their use, but for the passing of new laws, the formulation of new international agreements, designed to prevent the necessity arising of America having to help herself. That is not characteristic of the spirit which has made America so great and powerful; in the writer's view, the phenomenon is due solely to the fact that the American public is unaware of the facts of the case. Their law of 1909 prohibited the importation of opium except for medical purposes; since 1909 to the time of the Jones-Miller law, America steadily imported, without any attempt at check, quantities of opium enormously in excess of her medical requirements.

Further, she obtained that opium exclusively from sources which were not subject to international control of any kind—in other words, the whole of her opium came from Turkey and Persia, both of which countries stood outside the Hague Convention. The position was exactly similar in the case of the much more noxious drugs such as morphine, heroin, cocaine, etc. Practically the whole of her imports, during the last year when such imports could legally be made, came from Switzerland, which also is outside the Hague Convention.

There was no secret about these imports, and the question of smuggling did not arise. The drugs were openly imported; they are duly entered in the United States customs returns; duty was paid on them to the United States Government. The customs duties were not particularly high; they were certainly in no sense prohibitive. Why should anyone have bothered to attempt to smuggle when the front door stood open? And why should America seek to place upon other nations the responsibility for a state of things which she could have stopped, at any moment, had she chosen to enforce her own statutes on the subject?

India resents, and rightly, the constant stream of abuse to which she has been subjected, more particularly in America. That abuse is, beyond all doubt, due in part to political motives. It cannot be doubted for a moment that the American people would have been the first to see that this torrent of calumny was stopped had they been aware of the facts of the case. India is no more responsible for the drug situation in America than she is for the dolmens in Brittany. She stands absolutely and completely outside America's problem, except to the small extent to which the Philippine Islands are concerned. That is a matter which can best be treated separately. It is sufficient here to say that, as regards these islands, India has throughout done her best to assist America in carrying to a successful conclusion an experiment which India herself initiated, many years before, for the larger problem, and in the more difficult circumstances, of Burma.

What are the results which India and America have respectively achieved in their efforts to grapple with the drug problem? Reduced to their simplest terms, they are that India—a country where opium has been used for generations, where it is employed in every household as the medicine in most common use, where the poppy can grow almost everywhere—has been for thirty years kept down to an average consumption of 26 grains per head per annum.

In the official Report of the Special Committee of Investigation appointed by the Secretary of the United States Treasury in 1918 on the traffic in narcotic drugs, the consumption in America of these drugs, excluding cocaine, was 36 grains per head, in terms of raw opium. That corresponds to an equivalent figure for Indian opium (on the basis of its morphine content) of 54 grains. In other words, the latest official figures show that India has for thirty years kept its consumption at less than half the consumption in America up to the year 1918. The Indian figure is 26, as against an equivalent official figure of 45 for Switzerland, and an approximate estimate of about 22 for the Northern countries of Europe. The estimated legitimate requirements of America range about 15 grains, in terms of raw Indian opium.

These results certainly do not suggest that India has any cause for dissatisfaction with the results of her policy for the domestic control of narcotic drugs; they do suggest that America has much to learn from Indian practice; and they place in a somewhat lurid light the campaign of vilification which a portion of the American Press has directed against India. These facts are only now becoming known in the United States; and there are already many signs that India's attitude, and India's policy, are beginning to be adequately appreciated there. Warm tributes have not infrequently been paid to India's self-sacrificing efforts, both as regards China and in respect of her opium policy generally; and the people of America are beginning to discover that they have been led by their Press into forgetting the beam in their own eye while professing much concern regarding the mote in their neighbours'.

COMMERCIAL SECTION

A NOTE ON THE PRESENT ECONOMIC CONDITION OF INDIA

BY SIR RAJENDRA NATH MOOKERJEE, K.C.I.E.

GENERAL REMARKS.

THE authors of the Report on Indian Constitutional Reforms (1917-18) sum up in a striking sentence their view of the public economy of India: "The economics of a country which depends to so great an extent as India on agriculture must be unstable." In a land, almost a continent in size, and embracing extreme climatic conditions, with a population as heterogeneous and mixed as Nature's own gifts to her, it is not surprising that instability should be the note of her economic life. The assertion that the dependence of her people on agriculture is the chief cause of such oscillations is a matter of question and by no means axiomatic. Whether a lessened dependence upon agriculture would improve the economic equilibrium and provide greater stability to the country's economic life is less problematical. The years immediately following the outbreak of the war furnished an opportunity of testing on a grand scale, and in face of serious obstacles and drawbacks, whether industrial development could diminish the economic distress which follows even a slight failure of the agricultural harvest; or, in other words, whether the resisting powers of the Indian masses ordinarily living on a very narrow margin of subsistence were increased thereby.

That India has definitely decided for industrialization is an acknowledged fact. The late Mr. Justice Ranade was amongst the first to note, in 1893, that those tendencies which, during the century preceding, had impoverished and killed several indigenous industries had received a check

during the eighties. The next twenty years saw a definite growth of Indian industrialism, and hopes began to be entertained that India was ready to follow in the wake of Japan, both in the rapidity and the extent of its progress. Sir Theodore Morison reported, in 1911, on the Economic transition in India: "That India's industrial transformation was near at hand; the obstacles which had prevented the adoption of modern methods of manufacture have been removed; means of transport have been spread over the face of the whole country, capital may now be borrowed on easy terms" . . . in short, "all the conditions are favourable for a great reorganization of industry which, when successfully accomplished, will bring about an increase hitherto undreamt of in India's annual output of wealth."

While the years immediately preceding the war witnessed a great effort on the part of the Indian people to start industrial concerns of all descriptions on an extensive scale, the intervention of war, after a temporary setback, gave an added stimulus to the movement. India became responsible for providing the sinews of war in the East, and her Government and people, rising to the occasion, supplied the great armies in Mesopotamia, Palestine, the Dardanelles, and Egypt with food rations, and with ammunition, besides providing railway equipment, river craft, and other mechanical and engineering stores necessary for opening out a hostile country. The Indian Industrial Commission of 1916-18, under the presidency of Sir Thomas Holland, of which I had the honour to be a member, and over whose deliberations I presided during a tour of enquiry, focussed the legitimate needs and aspirations of Indian industries. Its instructions were "to find out new openings for the profitable employment of Indian capital in commerce and industry." The Commission emphasized very strongly the "necessity of securing the inception in India of certain very specialized and essential industries which must be set up if grave dangers are to be avoided." We have in the Report of the Commission an authoritative and representative view

of the industrial needs of India. By accepting its main recommendations, the Government associated itself with the widespread hopes and aspirations of the educated classes of the country, who see in the growth of industries a sure means of increasing the wealth and prosperity of the nation as a whole.

Recording, therefore, the decision of the Indian people and Government for progressive, indeed rapid, industrialization, we can proceed to enquire whether the little that has been achieved has tended to minimize the economic dependence of the masses upon the vagaries of the monsoon. Such an enquiry can at best be tentative, for the data are too recent and incomplete to justify a definite conclusion. Dr. Harold Mann's valuable investigations into the economic life of certain Deccan villages throw, however, a significant light on the influence of industrial development on the economy of a ryot. His enquiries support the *a priori* conclusion that the villagers had benefited from the opening up of industries, that economic pressure upon the agricultural masses was diminishing, and that scarcity of rains in 1920 did not produce the same extent of hardship and penury which had frequently formed the aftermath of a drought in the past.

The Great War brought about results within a few years which otherwise would have needed a generation to fructify. Drastic changes in the economic and financial outlook of India became necessary as a direct corollary of world-events over which India had no control. The cessation of hostilities found India ready for a great industrial push, for which intensive preparations had been made during the years of struggle and necessity. Relieved from war's burdens, the need for careful discrimination seemed to disappear. India plunged blindly into the vortex of company promotion on a scale that no one dared to dream of in pre-war years. Over-speculation and over-trading in 1919 brought about the usual Nemesis. Chaotic conditions in Europe, combined with an acute failure of the monsoon in

1920, brought about a reaction, from the effects of which India is still struggling. No stable country shows in her international trade such violent fluctuations as India has done during the post-war years. A favourable balance of trade of Rs. 119 crores to India's credit for the year 1919-20 was converted into an adverse balance of Rs. 78 crores in 1920-21. The fall in the exchange rate from 2s. 10½d. to 1s. 5d. within the course of a few months in 1920 was the inevitable result of the violent fluctuation in her foreign trade. The failure of wages to equal the rise in cost of living produced, for the first time in the history of Indian industries, labour troubles on a considerable scale. Political incidents complicated the economic position. The reaction produced a complete stagnation in business within the country. The year 1922 reaped the crop which the feverish speculation of 1919-20 had sown. Confidence was rudely shaken. Cessation of ordinary commercial activities brought about liquidation of many concerns which had started in the flush of the boom period, bringing down in their fall several enterprises which deserved a better fate. The trade balance still remained unfavourable to the extent of 21 crores of rupees, and was aggravated by heavy purchases of silver. High costs of production necessitated drastic reductions and enforced economies. Unemployment increased the economic pressure. Signs are forthcoming, however, that the corner has been turned. The year 1922-23 shows once more a favourable balance of trade amounting to Rs. 90 crores, though this was reduced to Rs. 28 crores by very heavy imports of gold (41 crores) and silver (18 crores). Unemployment and distress, however, remain acute, for confidence is shy of growth. The deep slough of depression appears to have passed, but careful reconnaissance is needed for complete emergence. The real post-war adjustment is perhaps now in progress. Although the highly satisfactory settlement with Turkey and the Far East will tend to hasten its movement, the difficult and almost chaotic conditions on the European

Continent may seriously retard it. India cannot get away from the influence of world factors, and must try to understand and appreciate her position in the economy of the commercial world and throw her weight in favour of a speedy reversion to normal conditions of harmony and goodwill.

AGRICULTURE.

India is predominantly an agricultural country. About 70 per cent. of her population derive their livelihood from land; 260 million acres out of a total area of 960 million acres are under crops. Advocates of Indian industrialization have often failed to grasp the fundamental fact of the economics of India that for generations to come agriculture will remain the chief occupation of her people. I do not mean to suggest that there is any conflict between agricultural and industrial development. For I consider agriculture to be the basic industry of a nation, and, as such, embraced within the sphere of industrialization. The ideal is to secure the fullest possible use of the land for the production of food and raw materials by means of an ever-diminishing proportion of human labour. The method is the application of scientific research to agriculture.

Agriculture in India is still of an archaic type; primitive and crude appliances are used where more modern types could multiply the yield of the land; the ignorance of the cultivator combines with the rigidity of custom to prevent the rapid introduction of newer methods. Of recent years, however, partly as a result of competition in marketing, partly of the praiseworthy propaganda of the Government Agricultural Departments, and in part as an indirect effect of the widened basis of occupation arising from the opening up of manufacturing industries, and also to a general diffusion of knowledge concerning the outside world, the methods of Indian agriculture are being gradually adapted to modern conditions. Increased means of communication—roads, railways, and canals—have brought the farmer

nearer the towns and markets, and increased his knowledge of the outer world. A tendency toward specialization of crops is distinctly observable. The Government departments have directed particular attention to this feature. Land which has been found peculiarly adapted for the growth of cotton is now reserved for that purpose. The result is a bigger yield per acre and improved strains. It has been found possible to grow the longer American staple in the Punjab. The average yield per acre is still very poor, being between 75 and 100 lbs. only, as compared with 180 lbs. in U.S.A. and 360-400 lbs in Egypt. With the formation of a Central Cotton Committee, to act as the connecting link between agricultural departments and the cotton trade, it may be expected that an impetus will be given to the improvement of cotton production in India. The question is of Imperial interest, for India is the second largest producer of raw cotton in the world, America being by far the biggest producer. India enjoys a world-monopoly for the supply of jute fibre. It is the chief trade of Bengal, and, although the record production of 10½ million bales in 1914 has not since been reached, great improvement has been made in the development of superior strains. Efforts are being directed to improve oil-seed production. The oil-seeds crop holds a prominent place, covering about 9 million acres. The production is estimated at over 5 million tons a year, of an aggregate value of 50 million pounds sterling. The seeds form a very important part of India's export trade.

Of the food crops, rice occupies the premier position. Wheat, jawar, bajra (millets), grain, barley, and maize are other important harvests. These crops are vital factors in the daily life of the people. Improved varieties and better seeds are being distributed on a large scale, and improvement in yield and strains is already visible in various centres.

The effect of war on agriculture was slight, except where (as in the Punjab) the agricultural villages formed the chief

recruiting centres for the army. The general rise of prices benefited the agriculturist, but this benefit vanished rapidly as the prices of other commodities rose. Migration to the towns in search of factory employment was more noticeable during the years immediately following the termination of hostilities. The Indian ryot still suffers from great poverty and consequent indebtedness to usurious moneylenders. The spread of co-operative credit has relieved the burden a little, and it is a welcome sign that the agriculturist has learned to look with interest on schemes of co-operative production and selling. His traditional instinct inclines him to view with favour communal methods, and the co-operative movement has a great and splendid future in India. That the conservatism of the Indian peasant is a bar to progress is no longer true. Dr. Rushbrook Williams, in his "India in 1921-22," explodes this idea: "The so-called conservatism of the Indian cultivator is generally merely that of the sound practical farmer, who requires good reasons for departing from well-established practices. The economic influence of high prices, combined with the intensified demand resulting from the war for higher production, has stimulated in great degrees the adoption of improved practice." There are reasons to believe that the general standard of living of the Indian peasant has appreciably risen: he showed stouter resistance than in previous years to the scarcity and distress following the failure of rains in 1920. Indian agriculture is capable of vast improvement; the chief requirements are provision of cheap finance, better marketing, and more knowledge, coupled with enlightened tenancy legislation.

FINANCE.

The recent controversy over the salt duty has directed public attention in England to the financial position of India as a debtor country. The Budget estimates for 1923-24 have been balanced at about Rs. 204 crores (1 crore = 10 millions), the only change in taxation being

the doubling of the salt tax to Rs. 2·8 a maund. The year 1922-23 closed a quinquennium of deficits which amounted to Rs. 100 crores in five years. The new Finance Member, Sir Basil Blackett, pledged to balance the Budget, after accepting part of the recommendations made by the Inchcape Retrenchment Committee, was faced by a deficit of 5·85 crores. This proposal to make up by an increase in the salt tax met with strenuous opposition from the Legislative Assembly, and was finally carried only by recourse to the emergency powers vested in the Viceroy. The main items of expenditure budgeted for 1923-24 are (1) Military Services, Rs. 62 crores ; (2) Civil Services, Rs. 101 crores. Customs, Income Tax, Railways, Posts, and Telegraphs are the main sources of revenue. The war years have doubled the amount of the national debt. From Rs. 411 crores in 1914 it increased to Rs. 844 crores in 1923, inclusive of the floating debt and the sterling debt (240 million pounds). The proportion of productive—*i.e.*, income-yielding debt, viz., Rs. 557—to unproductive debt, viz., 287 crores, is not an unhealthy one considering the excessive financial strain put on India's resources during war time (which included a gift of 100 million pounds made to Great Britain as a war contribution). The necessity for further reduction of expenditure, especially in the military services, is still imperative. With the introduction of ambitious schemes of improvement in urban centres an increase in local rates may be forecast.

Steady progress has been made in the extinction of the floating debt. The unusually strong support given to rupee loans in India, indicating, as it does, the larger release of Indian resources, has helped the Government to reduce the floating debt by over 40 crores during the last financial year.

The Finance Member rightly sounded a note of warning against allowing a succession of deficits ; and with trade brightening up there is every hope that India will show a favourable credit balance in the near future, and thus obviate

the need of overriding the Assembly again. For, however necessary an unpopular measure may be, public controversy on it almost always disturbs the financial market, and exercises an adverse influence on the credit of the country abroad. Confidence, the basis of faith in the financial solvency of the debtor, is extremely sensitive to continued "divisions in the house." And India must realize that for her economic development she must continue to look to the London money-market for many, many years to come. The outlook, on the whole, is very promising. After well-distributed monsoons for two successive years, and her great strides in manufacturing industries, India may legitimately count on recovering her name for sound and secure credit. There is need of this, for, if anything be necessary to accelerate her economic progress, it is the supply of cheap capital.

(To be continued.)

ARCHÆOLOGICAL SECTION

TUTANKHAMEN: EGYPT AND ASIA

BY WARREN R. DAWSON

THE brilliant discovery by the late Earl of Carnarvon and Mr. Howard Carter which amazed the world in November, 1922, is still the brightest star in the archæological firmament. Under its stimulating rays a widespread and renewed interest has grown up in Eastern archæology, and many books have appeared during the past twelve months under its kindly influence. Some of these are the belated realizations of works long in preparation, others have been specially written for the occasion. In the following paragraphs we will briefly survey some few of these works. To include them all would expand this sketch to unwieldy limits.

The place of honour must justly be given to the official publication by Mr. Howard Carter and his collaborator Mr. A. C. Mace,* which appropriately appeared on the anniversary of the great discovery. There is no need to re-tell the story of the "find" here, it is now so well known, and a correct version of it, free from embellishments, is placed on record in this book. The authors in a most pleasant and readable narrative have unfolded every stage in the discovery, and have given a good account of the previous explorations in the Valley of the Kings. The authors frankly admit that the time has not yet come to write a full account of the tomb nor of the objects discovered in it. This must be postponed until the whole task of clearance is finished and all the objects and their inscriptions have been

* "The Tomb of Tut'ankh'Amen, Discovered by the late Earl of Carnarvon and Howard Carter," by Howard Carter and A. C. Mace. Vol. i, with 104 illustrations from photographs by Harry Burton. Cassell and Co., Ltd. 1923. Price 31s. 6d. net.

studied in their mutual relationships. They protest against the premature opinions "advanced by authors who have never seen the tomb, let alone its contents," one such opinion being that many of the objects are of Mesopotamian origin (p. ix), although all the evidence from the tomb itself proves that it and its contents are "in every way pure late Eighteenth Dynasty Egyptian."

The illustrations are superbly reproduced. The subjects are familiar from the photographs of them that have already appeared in *The Times*, but we cannot suppress a regret that there is not a single illustration in colour, in spite of the high price at which the volume is published.

The reader, however, must be grateful for this fine preliminary record, and possess his soul in patience until the excavation is complete and the wider significance of the innumerable objects of priceless artistic and scientific value can be interpreted. Mr. Howard Carter has touchingly dedicated his book to Lord Carnarvon, and a lucid and sympathetic memoir of the late Earl is contributed by his sister, Lady Burghclere.

This stately book, stately in every sense of the term, will find a universal welcome. The production leaves nothing to be desired except that by an oversight the syllabic hieroglyphic sign *men* in the Pharaoh's name, which occurs four times inside the covers, has been printed upside down. This, however, is a very minor detail.

Tutankhamen is the hero of several other new books this year. He is the hero and not the central figure, for so little is known of him that until the contents of his tomb have all been moved and studied no monograph on this king is possible, as we have already said. The indefatigable Sir Ernest Budge has produced a book* dealing with the Akenaten period to which Tutankhamen belongs, and

* "Tutankhamen: Amenism, Atenism, and Egyptian Monotheism," by Sir E. A. Wallis Budge, Keeper of the Department of Egyptian Antiquities in the British Museum. London: Martin Hopkinson and Co. 1923. 8vo. Price 10s. 6d. net.

has collected into handy compass the materials for a survey of the times, together with the hieroglyphic text of the Solar Hymns which were engraved on the tomb-walls of El Amarna. Sir Ernest does not accept the high valuation placed by Professor Breasted and others on the greatness of the heretic king. He pictures him as a fussy fanatic, hopelessly incapable and obsessed with hostility to the Theban god Amen. He was certainly a weak ruler, but the purity of his religion and thought, and its profound influence on the most conservative country in the world, proclaims him as a great personality, so great, indeed, that his reforms died with him. The remarkable couches or biers found in the tomb of Tutankhamen have already given rise to much speculation. They have, for instance, been stated to be importations from Mesopotamia, a notion rightly rejected by Sir Ernest Budge, who, however, proposes another just as fantastic. According to him (p. xiii) the Thueris (hippopotamus) couch represents Ammit the Devourer from the *Book of the Dead*. He quotes from the papyrus of Henufer a description of this tripartite beast, which is a familiar figure in the Judgment Scene where the soul is weighed in the scales. "Her forepart is crocodile," says the papyrus, "her hindquarters are hippopotamus, her middle part lion." As Ammit has the *tail* of a hippopotamus and the head of a crocodile, it seems hard to equate the monster with a hippopotamus-headed beast. He goes on to say "the Mesopotamians knew no such beast, and the couch or bier could only have been made in Egypt, where the existence of Ammit was believed in and the fear of her was great" (pp. xiii-xiv). Such a creature, we think, would scarcely be chosen by the dead king to be his eternal companion, closeted with him for ever in his tomb.

The correct interpretation will be found in Professor Elliot-Smith's little book.* Here the couches are shown

* "Tutankhamen and the Discovery of his Tomb," by G. Elliot-Smith, M.A., M.D., Litt.D., F.R.S. George Routledge and Sons, Ltd. 1923.

to be, not Mesopotamian importations, but representations of a triad of gods thoroughly and typically Egyptian. The same trio of couches was represented on the walls of the tomb of Sety I. (and doubtless also as actual pieces of furniture in the tomb before it was plundered). On page 109 is an illustration of the three couches from Belgoni's sketches, made over a hundred years ago before the scenes were mutilated, and almost obliterated as they are now. We may add to these the fragments of another actual Thueris couch, which was found in the tomb of Horemheb, and which is now in the Cairo Museum. The author states : "I have used the Pharaoh's name 'Tutankhamen' as the title of this book merely as a label to suggest the circumstance that called it into being" (p. 10), and after a brief introductory chapter on the king and his times, he proceeds to an account of the discovery of the tombs in the valley, and to various points of archaeological interest suggested by them. Thus we have the Story of the Flood and its relation to the famous inscription in the tomb of Sety I.—the Destruction of Mankind. "Getting to Heaven" is the elaboration of the study of the ceremonial couches. Perhaps the most useful chapter is that on the Ethics of Desecration, which is a fitting antidote to those who poured a flood of ignorant sentimentalism into the Press.

Professor Capart, of Brussels, who visited the tomb after its opening, has published a reprint of the articles written on the spot at the time;* but as the present writer is responsible for the English edition of it, no more than this passing mention is permissible.

Tutankhamen claims a chapter in the Rev. James Baikie's new book,† which, in a series of brightly-written chapters,

* "*Toutankhamon*," par Jean Capart. Bruxelles: Vromant et Cie. 1923. English Edition, London: George Allen and Unwin, Ltd. Price 4s. 6d.

† "*The Life of the Ancient East*," by Rev. James Baikie, F.R.A.S. London: A. and C. Black, Ltd. 1923. 10s. 6d. net.

deals with the results of recent excavations on some of the most important sites in Egypt, Crete, and Western Asia. The story of Abydos, Egypt's holy city, the traditional burial-place of Osiris, is told from the results of many seasons' excavation by Petrie, Amèlineau, Naville, and others, who have made important discoveries there from the dawn of history. Abydos is associated with the oldest traditions of Egypt from the first dynasty, whose royal tombs are there, down to later times. Thebes, its temples and tombs, and Tell el Amarna, the City of the Heretic King, are likewise the subjects of other chapters. In Western Asia, Lagash and Babylon, Nineveh and Troy are dealt with, but perhaps the most useful chapters are those which deal with Mycenæ, Knossos, and Gezer, as the great progress of archæology in connection with these sites is less well known than is the case in Egypt and Assyria. The book is well illustrated and well produced, and will be of great service to the many who are genuinely interested in Eastern archæology, and who have not the facilities to make a deep study of the subject but require their reading to be authoritative as well as popular.

The excavations carried on in 1920 and 1921 by the Egypt Exploration Society at Tell el Amarna, the city of the heretic king Akhenaten and the first home of Tutankhamen, have been fully described and the results published in a stout quarto volume by Professor Peet and Mr. Woolley, the excavators, with contributions on special points from their staff.*

The principal results of the work are the establishment of the town plan and the excavation of many houses, from the mansion of the vizier Nakht to the small tenements of labourers, which are closely packed along parallel streets just as they are to-day in any town. The numerous plans by Mr. F. G. Newton show the general arrangement of the

* "The City of Akhenaten." Part I.: Excavations of 1921 and 1922. With 64 plates. London: Egypt Exploration Society. 4to. Price 42s. net; to members of the Society, 28s. net.

main city site and of the suburbs, and recall the similar discoveries made many years ago by Petrie at Kahun.* The details of the domestic arrangements can be perfectly made out, and a large number of utensils and tools was found.

The houses of the nobles and high officials were built on raised terraces surrounded by gardens. That of the vizier had thirty rooms, with a spacious central hall with a lofty roof upheld by massive columns. Mr. Newton has executed a superb coloured restoration of this hall with its decorated doorways, its coloured frieze and blue ceiling. The narrow windows are placed high up immediately below the ceiling, and instead of glazing have a grid of stone mullions. The whole effect is very impressive and stately, and might well be taken as a model by architects of to-day. In the palace at Meru-aten was a beautiful pavement of painted plaster, now sadly wrecked. From thousands of fragments sent home a number of complete panels has been restored and sent to various museums. They were adorned with botanical subjects of marvellous grace and beauty, executed under the best inspiration of the period and entirely free from the usual conventionalism of Egyptian art. Some of these are reproduced in colour, together with the coloured restoration of a painted floral column.

The book deals *in extenso* with the whole of the area hitherto worked—the houses, the tombs, the palace, etc.—and special chapters deal with the antiquities discovered, the inscriptions, and the river temple. The publication is a great credit to the perseverance and skill of the excavators and to the artistic genius of Mr. F. G. Newton. The expedition is once more afoot, continuing the excavation of the site and obtaining the material for the second volume.

Tell el Amarna, by its famous letters, links Egypt to Western Asia, and we now have to notice the publication of a cuneiform text of great historical importance.† Mr.

* "Illahun, Kahun, and Gurob." Pl. xiv.

† "The Fall of Nineveh." The Newly Discovered Babylonian Chronicle, No. 21,901 in the British Museum. By order of the Trustees. Small 4to. 1923. Price 4s. 6d. net.

C. J. Gadd, of the British Museum, has studied and translated the Babylonian Chronicle in that collection, and his modest little book, which looks like a museum guide-book, is really a scholarly and able exposition of an important and difficult subject. The inscription, edited by Mr. Gadd, gives an account of the Fall of Nineveh, which can now be dated to the year 612 B.C. The Assyrian capital fell after a siege of two months by the united forces of the Babylonians, Medes and Scythians. The text gives the events of the momentous years preceding the fall of the great city, a deeply interesting narrative which is now available to all at a modest price.

The British Museum trustees have also issued this year a large folio volume containing photographic facsimiles of some of the priceless hieratic papyri in the collection which we reviewed in a previous issue of this journal.*

Sir W. Flinders Petrie continues his literary activity. This year he has brought out new editions of the first volume of his *History of Egypt* and of several others of his earlier works, but entirely new is his book on Social Life.† As explained in the Preface, this book is the brief forerunner of a large work, the *Descriptive Sociology of Egypt*, which will appear in accordance with the will of Herbert Spencer. The book is crowded with interesting facts and information, especially for Græco-Roman times, but nowhere do we get a complete picture of the social life of the country at any one time. We should like to see in their mutual relations the king, the court, the services, the priesthood, and the commoners. Sir W. Flinders Petrie dislikes footnotes, and in his books they are always conspicuous by their absence; but we cannot but regret the lack of stated authorities for most of the statements, and of bibliographical references for students who would like to follow up this or that point in fuller detail, or hear both sides of

* ASIATIC REVIEW, October, 1923, pp. 668-674.

† "Social Life in Ancient Egypt," by W. M. Flinders Petrie, D.C.L., F.R.S., F.B.A. London: Constable and Co., Ltd. 1923. 8vo: Price 6s. net.

the argument on points which are controversial. It is stated that references will be given in the larger work when it appears, but the two books will not necessarily have the same public. In the meantime, however, we may read this book rather as a collection of facts and speculations on the manners and customs of the Egyptians than as a complete picture of their social life. The frontispiece (the only illustration) is a reproduction in colours of the scene in the Theban tomb of Neferhotpe depicting the arrival of guests at the noble's house.

We must revert again to Tell el Amarna. The cuneiform letters of world-wide fame are the subject of yet another book.* The title is unfortunate, as these letters are by no means the oldest known. Letters of the twelfth dynasty, for instance, were amongst the papyri found by Petrie in Kahun. The matter is no less unfortunate than the title, and contains a mass of unsupported theory and distorted fact which would be hard to parallel. We will quote a single specimen. The Rameside kings were only priestly inventions, according to the authoress, and the name of Rameses was only a copy of that of the city of Rameses! We might as well solemnly state that the Plantagenet kings of England are only inventions of modern historians, and that George Washington was named after the city of Washington, or Napoleon after Napoleonville!

A very important contribution to our knowledge of the arts, crafts, manners, and customs of ancient Egypt appears in the new volume, just published, of the Theban Tombs Series.† The magnificent painted tomb-chapels of the

* "The Oldest Letters in the World," by Mrs. Sydney Bristowe. London: George Allen and Unwin, Ltd. 1923. 8vo. Price 5s. net.

† "The Theban Tombs Series," edited by Norman de Garis Davies and Alan H. Gardiner. Third memoir: "The Tombs of Two Officials of Tuthmosis the Fourth," by N. de Garis Davies. Illustrated by four plates in colour by Nina de Garis Davies, and by 34 plates in line and collotype. London: Egypt Exploration Society. 4to. 1923. Price 42s.; to members of the Society, 28s. net.

nobles and officials of Egypt have long been objects of wonder and admiration, but it is only in recent years that a systematic publication of them has been undertaken. The two tombs here described and illustrated are in many ways of unusual interest. The first belonged to a Second-priest of Amen named Amenhotpe-si-se. The banqueting scene in this tomb is remarkable in its representation of an orchestra of five female performers playing harp, lute, flute, lyre, and tambourine, drawn on a scale which enables us to see the details of the construction of the musical instruments. The owner of the tomb arrives at the feast in a two-horse-power car—a chariot drawn by a pair of prancing steeds. In another chamber the walls are adorned by craftsmen engaged in carpentry, pottery, and working in precious metals, their material for the latter being carefully weighed out to them in two large pairs of scales. We also see the construction of a chariot and its harness, a particularly interesting scene in view of the Egyptian chariots found in the Tomb of Tutankhamen. Another scene of special interest is the induction of Amenhotpe to his office in the priesthood, a ceremonial rite of great solemnity enacted in the presence of the king before one of the great pylons of the temple of Amen, which is shown with its guardian colossi and flag-masts.

The second tomb belonged to one Nebamun, a captain of the police. Here, in addition to the banqueting and other familiar scenes, we have some interesting details of the owner's official military duties. We see a review of troops and the leading-in of Syrian prisoners before the king, and many other details of the military police of which Nebamun was the commander. Belonging to his civil life, we may mention the vineyard scene, in which the whole process of wine production is shown, from the spreading vines, trained on ornate frameworks, to the final sealing and cellaring of the jars. The stockyard, with its herds of variously-marked cattle, is a picture of the greatest interest, as here is one of the rare representations of brand-

ing cattle. The animals are thrown and their legs tied together, while the branding iron, hot from fire, is pressed on the shoulders of the beasts. Nebamun's house, with its front door and high-placed windows and roof-ventilators, stands near by in the shade of two spreading palm trees. These are a few of the many points of interest in this fascinating and faultlessly-produced volume. Mr. Davies' many years' experience in the field of Egyptian archæology and his wide and detailed knowledge of his subject are apparent in every line of the descriptive text. The coloured plates by Mrs. de Garis Davies show with true artistic charm, coupled with absolute fidelity to the originals, the beauty of the work which adorns these Theban chapels which this book and its forerunners in the same series are saving from oblivion and neglect.

The fervent wish of every pious Egyptian was that his name should live for ever : next to Tutankhamen, the most fortunate ancient Egyptian must assuredly be the scribe Ani. The celebrated papyrus which bears his name has been published again and again, and if Ani's name is not known throughout the world it is no fault of Sir Ernest Budge's. In 1890 the official facsimile of the papyrus in folio plates appeared, to be followed very soon by a second edition and by a full translation. In 1913 Sir Ernest Budge published a new facsimile and translation of the entire document in two volumes, and in many of his other books copious extracts from the text or pictures of the papyrus have appeared. The shade of Ani has now to witness his papyrus in yet another edition.* Sir Ernest Budge has brought out a new edition in one volume of his translation of the *Book of the Dead* which appeared in three volumes in 1909. The three volumes are still retained each separately paginated, but bound in one cover and printed on thinner paper. This is doubtless to facili-

* "The Book of the Dead," an English translation, etc., by Sir E. A. Wallis Budge, M.A., Litt.D. London : Kegan Paul, Trench, Trübner and Co., Ltd. 1923.

tate literary references made to the book when in its original form, and is a thoughtful and considerate measure. Ani here shares his prowess with the owners of other papyri, for his own codex did not contain all the chapters of the *Book of the Dead*, and the missing ones are supplied from other manuscripts, principally those of Nebseni and Nu. Three folding plates in colour reproduce the Judgment scene, the burial rites, and the Fields of Peace from the papyrus of Ani, and a series of photographic plates provides us with specimens of the *Book of the Dead* of various periods from the eighteenth dynasty to Roman times.

Mr. Perry's "Children of the Sun"* is in many ways one of the most striking publications of the year. Its argument cuts so diametrically across much of the accepted ethnological dogma that it was hardly to be expected that the book would either exhaust its subject or carry universal conviction—nor indeed did the *Origin of Species* at the time of its first appearance. Some years ago Professor Elliot-Smith demonstrated the spread of the most characteristically Egyptian custom, that of mummification, over an eastward route practically all round the world, appearing as it did in widely separated continents and islands; and in subsequent works he adduced the evidence of ships, megalithic culture, and other features to the same end. Mr. Perry, who has already done original work in this sphere of ethnology, has taken up Professor Elliot-Smith's views and worked them out in more detail. He traces a great archaic civilization which had often long been extinct before the rise of the civilizations first known to Europeans. Such archaic civilizations were most pronounced in countries and islands where gold and other metals, shells and pearls are obtrusive. He shows how the significance of these objects

* "The Children of the Sun: A Study in the Early History of Civilization," by W. J. Perry, M.A., Reader in Comparative Religion in the University of Manchester. London: Methuen and Co., Ltd. 1923. Price 18s. net.

as "Givers of Life" promoted the rise and diffusion of this old civilization, which carried in its train sun worship, dual organization, megalithic culture, irrigation, agriculture, and the practice of mummification. Professor Elliot-Smith has long since shown that Egypt was the birthplace of these distinctive features, and Mr. Perry has now carried the point a step further and shows that Egypt was the birthplace of all civilization. The advent of the warrior into a hitherto peaceable race is an important factor, dealt with at length, which has profoundly influenced the destinies of the world for all time. It is impossible in this brief sketch to convey any idea of the huge mass of material, its authorities and its interpretation, which Mr. Perry has closely packed into his volume of 500 pages, but the futility of most of the criticisms which have hitherto appeared is sufficient to show that *a priori* prejudice is more in evidence amongst the critics than serious attempts to read and assimilate the evidence. In this, and in the next book we have to notice, Professor Elliot-Smith has found in Mr. Perry a redoubtable Huxley to expound and expand the suggestive and stimulating ideas which irradiate his works, and which have thrown such a glare of light into the dark corners of the old hide-bound ethnological dogmatism.

In his second book* Mr. Perry takes us back to primitive man in the so-called Aurignacian stage of culture, when he took up his abode in the caves of France and other countries. The starting-point of the quest is in the remarkable drawings which adorn the walls of the caves, and which depict animals hunted for food and dangerous beasts of prey. From these we may trace the origin of protective amulets and the birth of magic both in the service of the living and of the dead. We perceive the age-long endeavour of man to prolong life and to revivify the dead. From simple beginnings the vast and complex magical and religious systems of the world have grown up. The first real deity

* "The Origin of Magic and Religion," by W. J. Perry, M.A.
London: Methuen and Co., Ltd. 1923. Price 6s. net.

was the Great Mother, the provider of food and the protector from foes, an originally simple cult which soon became involved and gave birth to ramifications and extensions which are only intelligible if we trace them from their sources. Mr. Perry pleasantly explains to us the origin and functions of kings and gods, of early ideas on death and immortality, of sun-worship, and of the beginnings of mythology. So condensed and full of material is this book that no summary of it is possible, for it is itself a summary, as fascinating as it is useful. A bibliography of references is provided.

Mr. Terence Gray* has presented several periods and episodes of Egyptian history in dramatic form, a continuation of the method adopted by him a few years ago in his admirable picture of the reign of Queen Hatshepsowet. He is careful to distinguish between fact and conjecture, and has imparted a thoroughly Egyptian flavour to this theme. Many well-known characters of Egyptian history are brought to life and speak again, but his peculiar system of nomenclature makes some of our heroes hard to recognize under the curious new spelling he devises for their names.

Obelisks, like mummies, are distinctively Egyptian and at once suggest themselves to the mind on the mere mention of Egypt. Cleopatra's needle, which, of course, has nothing to do with Cleopatra but was made centuries before she was born, at close quarters cannot fail to impress the beholder with its vast mass. This monument, however, is a mere baby compared with the great obelisk lying unfinished in the quarry at Assouan. This latter has been exhaustively studied by Mr. R. Engelbach, the Chief Inspector of Antiquities in Upper Egypt, and was the subject of a special memoir written by him and published in 1922 by the *Service des Antiquités*. He now gives us the substance of this highly technical work in a popular

* "And in the Tomb were Found . . ." by Terence Gray. Cambridge: Heffer and Co. 1923.

form, bereft of abstruse calculations and technical details, but bereft of nothing of interest or value.* The Assouan obelisk is 137 feet in length, and its weight can be calculated at 1,168 tons! How were these vast monoliths handled and set up in vertical position? That is the question which hundreds have asked, Mr. Engelbach amongst them, but he alone has set about solving the riddle and has found a solution which is most probably correct. He has the advantage of being not only an archæologist, but a mathematician and engineer as well, and by combining his knowledge in these three directions, by observation and deduction, and by means of models and experiments, he has worked out in great detail and with abundant illustrations a deeply interesting and difficult problem. The book should appeal to engineers as much as to archæologists, and deserves the support of both.

At the Liverpool meeting of the British Association, Professor Newberry, in his presidential address to the Anthropological Section, dealt with Egypt as a field for anthropological research.† This address is crowded with suggestive ideas, which we hope the Professor will develop more fully. He deals with the evidence of the flora and fauna of Egypt, and deduces changes in the physical characters of the country from predynastic and Old Kingdom times. Against the common opinion that Egyptian civilization marched from the south, northwards, Professor Newberry, on the evidence of the physical conditions, the cult objects, and other material from the Delta, holds that the reverse is the case. A part of the Delta was known as "Olive-land," and we know from the palette of Narmer that Menes, the first historic king of Upper Egypt, conquered this land and united the two countries under one sceptre. The prototype of Osiris, the pastoral

* "The Problem of the Obelisks," by R. Engelbach. London: T. Fisher Unwin, Ltd. 1923. Price 9s. net.

† "Report of the British Association," Section H.: Anthropology. Address by Professor P. E. Newberry, M.A., O.B.E., President of the Section.

god of the eastern Delta, and his emblems, are derived from Syria, as the zoological and botanical evidence bears witness. Such are some out of many of the points of this interesting discourse. One has but to read it to be convinced of the necessity of more co-ordination between the sciences. Zoology, Botany, Geology, Anthropology, and a hundred other branches of knowledge have a mutual bearing, and one often illuminates the other, a point too often overlooked in this age of specialization in "water-tight compartments."

Finally, we may refer to the serial publication still in progress entitled *Wonders of the Past*. The editor has secured the services of many well-known archæologists to present in popular form, with an abundance of well-produced illustrations, the many aspects of the past history of mankind which have crowded in upon the public interest since the epoch-making discovery in the Valley of the Kings on November 6th, 1922.

LITERARY SECTION

LEADING ARTICLE

THE PASSING OF COLOUR PREJUDICE

BY STANLEY RICE

THAT unhappily there still exists a certain antipathy between the white and the coloured peoples of the earth is a proposition that needs no demonstration. Various explanations of the phenomenon have been attempted, which generally follow one or other line of thought. This one bases his argument on politics, that on sociology; a third will argue ethnologically, a fourth will perhaps resort to eugenics. All are right in the particular, so far as they go, and the sum total of their arguments answers everything but the one question which apparently they have asked themselves. That question may thus be stated: Why does this antipathy exist against colour *quâ* colour? Why should anyone be found to take exception to the colour of a man's skin when he has no feeling about the colour of his eyes and hair or about the shape of his nose? That is in the main a question for the ethnologist, and since he has not yet solved his problem, the reader cannot expect in this article more than probable conjecture. Some people indeed—among them, it would seem, Lord Milner—go so far as to deny that there is any colour prejudice pure and simple. They explain the antipathy purely on the ground of attributes; they argue that there is no feeling against the coloured man because he is coloured, but because the coloured races follow certain customs distasteful or unintelligible to the white, practise a different code of ethics, have but a rudimentary idea of social structure, and so forth. But this explanation ignores two things: it ignores the teaching of history, which speaks of colour prejudice long before there was any intimate contact with coloured races, especially African and Far Eastern, and it ignores the antipathy which some coloured peoples have for the white man, whose manners and customs they have never learned to analyse.

It has been suggested that this antipathy on the score of colour is of recent growth, and is due to "that arrogant confidence in the superiority of the white race over all races of a different colour" of which the late Mr. Hyndman spoke. This is what we have called the political or economic view of the problem, and though not stated in so many words, the implication is plain. No nation, except perhaps in abnormal times, has for another a stronger feeling than sincere friendship; on Mr. Hyndman's assumption, which this is not the proper place to discuss, arrogant confidence in one's own superiority does not admit of respect, and yet without respect there can be no sincere friendship. It was this same idea of contempt which actuated the Germans in the war when they spoke of England turning loose "her menagerie" of Nagas from Assam and Rajputs from Rajputana, and of Maoris from New Zealand and of Red Indians from Canada. It was, perhaps, partly owing to this feeling—that the undergraduates must not interfere with the quarrels of the dons' Common Room—which induced England to decline his proffered help of coloured troops during the South African War. Partly, but not altogether. There was also a feeling that white men should fight out their quarrels with white men in the white man's way, and that possibly the code of civilized warfare (if warfare can be civilized) as understood in white countries was only imperfectly comprehended of coloured races. That was the dominant feeling: there was probably also a certain element of pride and of forbearance; pride in the power of England to manage the job alone, and forbearance in the unwillingness to expose coloured races in a quarrel not their own.

But the antipathy is much older than the nineteenth century. "I am black but comely," says the Song of Solomon, "as the tents of Kedar, as the curtains of Solomon." There is virtue in that "but." And as if the author was determined that there should be no mistake about it, he adds immediately, "Look not upon me because I am black, because the sun hath looked upon me"; how different then from the beloved who is "white" and ruddy, the chiefest among ten thousand, "though his locks are bushy and black as a raven." It has been remarked as something curious that the dark-skinned servants and ayahs of India look with almost reverential feelings upon the fair-haired British children. There is nothing curious about it, even when we consider the matter from their point of view alone. The Song of Solomon has already shown us that a

fair complexion is preferred to a "black," even in the East. But we need not go so far afield as Palestine for our example. The Aryan race themselves were fair, and in their anxiety to preserve their fairness and to prevent degeneration by intermarriage, they created an institution and fenced it about with rules so strict that it has lasted unto this day, and will still be standing four-square when, to parody the famous *mot*, a Central African sitting above buried Agra is sketching the last remnants of the Taj. Scholars now identify the Danyas and the Dasyus, the demons and monsters of the Epic age, with the aboriginal inhabitants, and even at the present time the combination of a dark skin and a high caste, though not infrequent, is nevertheless the exception.

In quite early days Europe had cause to tremble at the appearance of the darker races. Although we may now flatter ourselves that the Greek defeat of Persia was the demonstration of the superiority of Europe over Asia, to the Greeks of the time it must have seemed little short of a miracle, comparable to the miracle which saved England in the sixteenth century from the greatest fleet and the best general of the age. What Asia was to Greece, Africa was to Rome. Thrasimene and Cannae threatened the extinction of the Roman Republic, or at best its reduction to the position of a vassal state under the darker races. In later ages, after Europe had tasted the quality of Attila the Hun, and Alaric the Visigoth, Muhammad raised the standard of Islam in Arabia, and to the terror of invasion and conquest was added the fierce passion of bigotry. To the Christians the dark races became identified with the heathen; to the Mussalmans the white were infidels. This is very apparent in the Song of Roland, in which the legions of Islam "served Mahomet and worshipped Apollo," and in consequence of this strange combination are impartially called heathen. They were, of course, chiefly African, from the "cursed land of Ethiopia" amongst others, and the bard is careful to add, "Blacker than ink are all the heathen folk, and naught have they white but their teeth." They were the servants of the Powers of Darkness, and in the bard's view their skins were of the appropriate colour. The prejudice against colour as such had already become merged in the antipathy to the principles for which the dark nations stood, but the state of cultural civilization had little to do with the feeling, for it is admitted on all hands that the Christians of Spain had little to teach their Moorish conquerors, nor for that matter had

the Muslims of Arabia anything to learn from Europe since the decay of Greek and Roman culture.

That colour prejudice persisted, had perhaps become crystallized into an article of faith, we can see from the works of Shakespeare. One of the earliest, if not the earliest, of his tragedies is *Titus Andronicus*, unfamiliar to those who have not made a regular study of Shakespeare, partly because of the orgy of blood and lust, and of mutilation or death, which make up the plot. The villains of the piece, Tamora and her sons, are Goths, but the arch villain in whose hands the others are as clay is Aaron the Moor. It surely was not for nothing that Shakespeare introduced this one coloured man into his *dramatis personæ*. He is a "barbarous Moor," a "ravenous tiger," an "accursed devil." He glories in the blackness of his skin and the blackness of his heart.

"Here is the babe," says the Nurse of the child, the ill-omened offspring of Aaron's intrigue with Tamora.

"Here is the babe, as loathsome as a toad
Amongst the fairest breeders of our clime."

AARON: "Zounds, ye whore! is black so base a hue?"

"Yes," the audience is expected to answer, for doubtless they will sympathize with the murdered Bassianus.

BAS: "Believe me, queen, your swarth Cimmerian
Doth make your honour of his body's hue,
Spotted, detested, and abominable."

That was not his only misdeed. He spits venom on the eve of execution:

"I am no baby, I, that with base prayers
I should repent the evils I have done.
Ten thousand worse than ever yet I did
Would I perform, if I might have my will;
If one good deed in all my life I did
I do repent it from my very soul."

It is not unfair to assume that in this early venture Shakespeare was expressing the commonly received opinion of his countrymen. In a more mature play colour prejudice appears, not this time as any indication of vice, but rather in conjunction with admitted virtue. For Othello is a highly respected citizen of Venice. To the Duke he is "valiant Othello," of such consequence that he has no eyes even for a Senator, though just before his coming had been announced. But Brabantio, to whom the alliance must otherwise have been an honour, has no thought except

for the colour, and Iago, knowing this, works upon him accordingly :

" Even now, now, very now, an old black ram
Is tupping your white ewe . . .
. . . The devil will make a grandsire of you."

Brabantio takes fire at once, not on account of any stain to his honour, for it is just as bad if they are married. Meeting Othello he falls to instant abuse.

" If she in chains of magic were not bound,
Whether a maid so tender, fair, and happy,
So opposite to marriage that she shunned
The wealthy curled darlings of our nation,
Would ever have, to incur a general mock,
Run from her guardage to the sooty bosom
Of such a thing as thou : to fear, not to delight."

He cannot believe that Desdemona acted of her own free will ; the black man must have bewitched her, for how could she

" Fall in love with what she feared to look on ?"

Our sympathies throughout the play are, and are meant to be, with Othello, the man " more sinned against than sinning," and yet the protests of Brabantio, Iago's tool, are evidently sincere. He does not think of the consequences of mixed breeding ; a black man is a thing to fear, not to delight, and it is taken for granted that the very sight of him must have repelled Desdemona.

Here is a possible explanation of the portent of colour prejudice. It is instinctive, not rational. To some people it seems as hard to overcome as a woman's proverbial fear of a mouse, as the common shrinking from sight of the dead, as that eerie horror that some have of the cat. And the root sentiment which gives rise to this instinct is that the coloured man is abnormal to the vast majority of the white race. He may form the majority of the world's population ; a statistical fact of that kind does not strike the imagination as does the actual corporeal presence.

And as evidence that this is so we may well turn to the reverse case. It is not easy to quote literary examples, because Africa has no literature, and Asia has not till recently been brought into contact with Europe, or can only express herself in a language unintelligible to most Englishmen. It is, however, well known that savages have opposed the landing of white men, and, more significant still, have run away—men and women alike—at sight of a pale face. Instances have been quoted by a writer in

The Times of an Abyssinian Last Supper, in which all the figures are black except Judas, who is white; and again by Lord Ernest Hamilton, who found a similar altar-piece at Haiti, as well as a coal-black figure of the Virgin. It is doubtful whether these can definitely be ascribed to colour prejudice, but they do at least suggest that the mind instinctively turns to an abnormal colour when it seeks to depict a distorted character.

With the improvement of communications, with exploration in Africa, with the opening of the Far East to Western intercourse, colour prejudice has tended to decrease, or at any rate has taken on a new aspect. The very fact that it is now called in question is testimony to the new phase, for probably in earlier times it would have been taken for granted as easily as we take for granted the fidelity of a dog to his master. It is significant that that nation whom in 1904 the Russians in their contemptuous ignorance called "yellow monkeys," and whose colour and continent were to some Englishmen a sufficient argument against effective alliance, are now among the most respected in the world. *Tout comprendre c'est tout pardonner*; it is more than pardon and excuse. It is the great weapon by which we overcome ignorance, and with ignorance prejudice.

It is idle to deny that the prejudice still exists, but it has taken a different direction. The individual Indian, Japanese, African has become so familiar a figure in the streets that he has ceased to attract any attention or to create any instinctive repugnance. The races have been brought closer together; Asiatic culture is recognized among cultured people, and Asiatics are cordially received in English society. Indians have been elected to Parliament: can we imagine an Indian taking part in the debate on the American colonies?

The heart of England went out to the Japanese in their recent trouble less, one might say, to the nation as such as to the individuals composing it, whose sufferings appealed so poignantly to a people only too lately acquainted with individual grief. In short, continual contact with men of another colour of skin, whether in their own home or in this country, has so blunted the sharpness of instinctive repugnance that we are proud to count among our friends and to welcome to our homes those whose qualities we esteem, be their skin yellow or brown or black or white. That this is universally the case can hardly be claimed; the prejudice persists with a strength in inverse ratio to

knowledge and experience. But it has become rather political than ethnic. One may confidently swear that those who rail most bitterly against the Indian politician for his aims and for his methods can recall many a pleasant conversation with such as he, and those who talk disparagingly of Indian peasants look back regretfully to the quiet devotion of Indian servants. Sir Valentine Chirol provoked a controversy in *The Times* which showed a tendency to be narrowed down to the test question: "Should we like to see our cities occupied by the victorious enemy with his coloured troops?" "Why not," asked Sir Valentine, "so long as they behave themselves? The occupation of Belgium by white troops would take a lot of beating, if atrocity is what you fear." That is true, but the instinct is the same. Is it due to colour prejudice? Suppose that the coloured races could so alter their special physical characteristics as to approximate to the white. Suppose, in a word, that the outward coloured man became as the outward white man, would not the objection remain? For the true cause of colour prejudice, regarded from this point of view, is spiritual not physical. The white man could not bear the thought of being dominated by anyone, least of all by those whom he has himself dominated and whom he regards, or has traditionally regarded, as his political inferiors. Let anyone ask himself the fair question: Would I rather see Manchester occupied by Japanese or by Central Africans?—assuming, of course, irreproachable behaviour in both cases.

The two nations who have shown themselves at one time or another most free from colour prejudice are the French and the Indians. The latter assertion may be received with incredulity, having regard to the unfortunate racial animosity which was lately manifested. But surely the early records give no sign that India ever objected to white men as white men. On the contrary, they were received with honour by the Princes; they were allowed to settle in the country, to establish factories, and even to propagate an alien religion. When the time was ripe they were called in aid of this or that chief against his enemies, following the immemorial custom of his ancestors as revealed in the Mahabharata. And when at last Fortune executed that extraordinary stroke which turned a trading company into a Government there does not seem to have been any resentment. The sudden discovery that the English Government, recently so "benevolent," has been throughout selfish, cruel, callous, and altogether evil is the direct

outcome of the almost equally sudden national consciousness, and is therefore a political doctrine, uncoloured, unless here and there to give point to a phrase, by any reference to the whiteness of his skin.

The French, whatever may have been their sentiments in the past to the individual coloured man, have never, since they became a Colonial Power, leaned towards the intolerance of the Dutch Boer, who made it a fundamental doctrine of his Constitution that there neither is nor ever shall be equality between the white and the coloured man. That is perhaps the most extreme case in modern times of colour prejudice pure and simple. The French, on the other hand, have inclined to the opposite extreme. They have forestalled political animosity by granting political rights to their coloured subjects, so that every man, be he brown or white or black, may feel himself truly to be a citizen of the Republic. In this policy they may have been fortunately placed, in that they have no undeveloped colonies where the clash of three civilizations proves an obstacle to complete equality, and no "white" colonies where the economic pressure and the struggle to live has intensified colour prejudice to the degree of exclusion, and has aroused corresponding bitterness among the excluded. It remains, however, broadly true that the French are to-day more free from colour prejudice pure and simple than any other people of consequence in the world.

If this diagnosis approximates to the truth we have made great progress towards the elimination of colour prejudice. We have long left behind us that religious fanaticism which fastens upon every coloured man not a convert to Christianity the opprobrious epithet "heathen." We have forgotten, or nearly forgotten, the Shakespearean idea that a coloured skin covers a black soul, or that a coloured man is a fearsome beast. It remains for the white man to put away the arrogance of which he is roundly accused by Japanese, by Indians, and even by detached American observers, and to recognize that when economic obstacles are overcome and political differences are adjusted, no man need suffer in estimation by reason of the colour of his skin.

OUR REVIEW OF BOOKS

INDIA

A REVIEW OF PROGRESS IN INDIA

INDIA IN 1922-23. By L. F. Rushbrook Williams. (Calcutta: Superintendent of Government Printing, India; 1923.)

Official reports on India are not ordinarily regarded as a fascinating form of literature. But even India moves with the times, and Mr. Rushbrook Williams' survey of Indian progress in 1922-23 is a readable compendium of well-marshalled facts and views. Three hundred pages are not an excessive measure for the annual chronicles of that great continent. The form of the volume is handy. There is a refreshing freedom in the comments made, so that, though the review is presented under the authority and with the general approval of the Secretary of State, the reader is warned not to assume that the approval either of the Secretary of State or of the Government of India extends to every particular expression of opinion. There is an up-to-date ring about the book and its language—an abundance of diagrams and a not infrequent repetition of the word "normalcy." Mr. Rushbrook Williams is to be congratulated on his work.

The roads which the writer traverses are many. On some of them lurk two formidable dragons, financial stringency and the non-co-operation movement, both more or less moribund, but still capable of obstruction. Mr. Rushbrook Williams takes us by the hand and bids us fear not. He cogently points out a fundamental fact which sometimes escapes the notice of those who regard Indian finances with a pessimistic eye—namely, that out of the £520,000,000 of India's debt only £150,000,000 is unproductive. He assures us that there is taking place a gradual return to normal conditions; that there is considerable indirect evidence as to a growing prosperity rather than to an increasing of poverty. And the annual budget has been squared. Mr. Gandhi is discredited and immured. It remains indeed to be seen what crop the teeth of his strange doctrine, once sown, will produce. If we are to judge from their activities on local bodies, there is perhaps not much to fear. For, we are told, in several quarters at least the introduction of the non-co-operating element, after its first ebullitions, has been accompanied by a distinct awakening on the part of members of those bodies to their obligations towards the public at large. And probably Mr. Rushbrook Williams is right in thinking that the movement has received its quietus. The reasons for its decline and fall are, as he himself shows, far stronger than the question of entry into the reformed councils, which he describes as the obstacle on which it was ultimately shattered. Apart from the magnetism of its author, the two props on which it rested were Hindu-Muslim unity in its prosecution and the success of its appeal to the masses. The appalling atrocities in Malabar and other happenings weakened one of those props. The constant postponement of the more attractive features in the leader's

programme, the substitution of unexciting and constructive items, and the non-fulfilment of the boast that Government would be brought to its knees disappointed the lawless, while fantastic aims and sterility of achievement alienated the law-abiding. The Royal tour and the success of the new Constitution did the rest.

But the author's cheerfulness does not end here. He sees some good in everything that he encounters. He views with equanimity the development of popular power and the widening of the area of criticism in the Legislative Assembly. He looks forward to a useful sphere of activity for Trade Unions. He regards the better side of "national" education as not wholly infructuous. Even Mr. Gandhi's doctrine, if rightly directed, might have achieved much of lasting benefit. "Let 'em all come" is Mr. Rushbrook Williams' motto. Some may regard such wholesale welcome as indiscriminate. But, on the whole, the optimistic tone is justified.

Mr. Rushbrook Williams guides us through divers ways; and, whether he escorts us over the turbulent fastnesses of the frontier or carries us to Keniya and its knotty problems, whether he threads the mazes of economic relations, leads our feet through India's mighty forests, or conducts us along her lines of communication, his guidance is pleasant and graphic. One would like to pause over the two great schemes (schemes of a kind which the agitator and even the reasoning politician too often overlook) of housing, especially for industrial labour, in Bombay, and of the great Sukkur irrigation project, both of which owe so much to the driving power of Sir George Lloyd. But in a work of this magnitude it is necessary to concentrate attention on some single point. And a point of vital interest is the future of the reformed Constitution.

Mr. Rushbrook Williams obviously appreciates the reforms. But he is under no illusion as to their difficulties. He speaks of the halting operation, at least in some directions, of the machinery set up. He seems to regard present arrangements as transitory—a view which is taken in many quarters. But where will India find herself when the transition period is over? The aim is a form of democratic government. This volume incidentally shows that the passage of India into a democratic State is likely to be, for years to come, no easier than the passage of a camel through the eye of a needle. Despite signs of awakening which the author sees, he gives us a picture coloured with apathy and dependence. "In the eyes of the vast majority of the inhabitants of British India, the State is something wholly external to themselves; a mysterious organization which owes them certain duties—chief among which they count protection—but to which they have no obligations beyond the payment of certain dues. In their eyes the machinery of the administration ought to function automatically. If it does not, they consider they are being cheated. They have no conception of the State as being something belonging to themselves; something of which each individual is an integral part; something which has claims upon their co-operation, upon their energies." We see little signs of the sturdy self-reliance which, growing through centuries, has built up the great democracies of the West. And many of the leaders of the people too often show a similar attitude. Local self-government

was implanted in India in the early eighties and, we are told, is striking its roots deeper year by year. It provides a useful field for experience and experiment in the problems which, on a larger scale, face the politician in the councils. The local bodies are not official-ridden; only 17 per cent. of the total membership of all District Boards consists of officials of any kind. Yet what does Mr. Rushbrook Williams tell us? He tells us that all local bodies show a most marked reluctance to tax themselves even for the accomplishment of strictly local utilities. He tells us that there is an even greater reluctance on the part of these bodies to employ their power of compulsion in the cause of elementary education, and that they evince a desire to thrust the onus on to the executive.

What is the remedy for these defects? "Without a widespread system of education of the kind suited at once to India's capacity and India's needs, the country cannot hope to realize those aspirations towards nationhood which are at present cherished by so large a number among her educated population." So says Mr. Rushbrook Williams; and he points to the fact that almost every province now has its law for the enforcement of compulsion in primary education, and that in Bombay the Government can impose compulsion without waiting for local option, to the educational activity displayed in the provinces, to the clear-sighted perception on the part of Ministers of the importance of mass education, and to the attention which they are devoting to a concerted attack upon illiteracy in its very stronghold. But the facts and figures show that the Ministers have an up-hill task before them and that the journey is going to be a long and arduous one. All but 3.39 per cent. of the population is still untouched by the existing educational system. Not only are Indian workmen on the whole illiterate; roughly half the policemen are illiterate. There is a lack of women teachers and of honorary workers towards social advancement in the villages. There is virtually a complete absence of effective demand for the education of girls. There is an alarming tendency towards "provincialism" in education. And, apart from the hesitating attitude of local bodies, to which allusion has already been made, there are two special difficulties. First, although the proportions of provincial revenues spent on education seem "very respectable," the general poverty of the country and the modest standards of the budgets permit only of an utterly inadequate outlay *per capita* of the population. Second, whatever sums may be found, by the release of provinces from the necessity of contributing to the central exchequer or by other means, for providing more money for education, the inexorable claims of secondary and University education will have to be satisfied. In the past, elementary education has lagged haltingly in the wake of these more ambitious forms. If women are left out of the reckoning, the proportion of the population undergoing secondary education is far greater than in England and Wales; and the figures for University education are still more striking. It will be strange if in the future the more advanced grades, especially in view of their inefficient standard, do not succeed in continuing to appropriate the bulk of available money; and we are told that the demand for secondary education is still almost inexhaustible. Education in India is not merely, as the writer

says, ill-balanced; it is also oligarchic in its tendencies. These tendencies will have to be resisted if the reforms are to be guided into the channel of democracy. For "only if the ideas of the people in general can be enlarged and their outlook extended, does it seem possible for India to develop the energy necessary for advance along the lines of responsible self-government."

THE ADMINISTRATIVE SYSTEM OF THE MARATHAS. By Surendranath Sen, M.A., PH.D. (University of Calcutta.)

(Reviewed by SIR VERNEY LOVETT.)

Dr. Sen divides his account of the administrative system of the Marathas into four parts or books: (1) The administrative system of Sivaji, (2) the administrative system of the Peishwas, (3) the evolution of the Maratha institutions from an "ancient heritage," (4) the Muhammadan contribution to this evolution. He arrives at the following conclusions: (a) "The Maratha institutions, compared branch by branch with those of contemporary Europe, cannot fail to extort our admiration by superiority and excellence in many cases" (p. 395). "The administration of revenue and justice was as efficient under the Peishwas as in contemporary England, and their spirit of toleration especially claims our notice" (p. 712).

The particulars which Dr. Sen gives in confirmation of these conclusions, and the arguments by which he supports them, are interesting to those who wish to understand the theory, often nowadays put forward, that British rule has been an unfortunate interlude in the history of India. Our author does not accept the argument of the late Mr. Justice Ranade that the Maratha demand for "chanth" was levied with the consent of tributary powers in return for protection against foreign aggression, and was in fact the precursor of Wellesley's "subsidiary alliances." But some of his own arguments—e.g., that "chauth" and "sardeshmukhi" were "quite different from spoils of war," resemble Ranade's.

He tells us that even the Pindaris, who, as professional plunderers, accompanied Maratha armies, and "shared their ill-gotten spoils with the State," had in their favour "the incontestable authority of no less than two great political philosophers and one great lawgiver." They might have pleaded prescriptive right and vested interest when Lord Hastings waged a war of extermination against them, but had "more faith in the good old law of might, and when a mighty Government refused to let them ply their old trade, they had perforce to beat their swords into ploughshares." It was, however, our author must admit, better for India that on this occasion prescriptive right and vested interest were disregarded.

The book contains much interesting information which might perhaps with advantage have been compressed into a smaller volume.

BRITAIN IN INDIA: HAVE WE BENEFITED? By Khan Sahib Maulvi Idris Ahmad, B.A. *Newal Kishore Press*, Lucknow, 1923. Price Rs. 2.8.

This small book, written by a Mussalman Headmaster of a High School in the United Provinces, is remarkable for the amount of information

compressed into 225 pages, and for the able manner in which the difficult subject of the development of British rule in India, and of the consistent thread of policy which has led to the recent reforms, is set forth. It is a serious effort to direct the mind of the Indian public away from the theories of agitators and dreamers to the outstanding facts of what Britain has done for the welfare of India during the last 150 years. It is an admirable answer to the fantastic views of Mr. Gandhi on the material benefits of Western civilization, and corrects the false perspective of Indian history which Mrs. Besant has done so much to popularize among the rising generation.

The book, though primarily written for Indians, is an accurate digest of facts contained in blue books, and would be useful to public men and reference shelves in this country. It is lucid and interesting, and betrays few, if any, of the faults associated with the English of our Indian fellow-subjects.

INDIA IN FERMENT. By Claude H. Van Tyne. (*D. Appleton and Co., New York and London.*)

(Reviewed by F. H. BROWN, C.I.E.)

This survey of Indian political and social conditions by the head of the Department of History in the University of Michigan is to be heartily welcomed as the work of a trained and dispassionate observer. Many cold-weather visitors to India write books which are vitiated by their preconceived notions and the tendency to adjust all they see to those notions. Mr. Van Tyne, happily, took to the country in the winter of 1921-22 a mind trained to historical accuracy, and to observe in a spirit of detachment political activities of the past and present. His plan of noting, while memory was still fresh, the conversations he had with leading figures in the great drama going on around him, with a view to reproduction of their salient points, gives actuality to his keen impressions.

Mr. Van Tyne tells us who it was that made this or that remark to him whenever he feels he can do so without violating a confidence or committing an indiscretion. Whether his judgment in this respect can always be accepted, or whether on other occasions the veil of anonymity is adequate may be questioned. For instance, it cannot be supposed that the Maharajah of Alwar—the possessor of “the most brilliant Indian mind” he found—will care to have it known that, two years ago at least, he thought the English mad to have entered upon the policy of the 1919 Act, and that he apprehends that the democracy to which it will lead will destroy all the foundations of caste and with them the Hindu religion.

For the most part, however, Mr. Van Tyne’s judgment is sound, and he is singularly successful in the cameos he presents of prominent figures in the life of India. In his estimate of the Viceroy he confesses that if he had been in Lord Reading’s place he never could have had the patience and courage he showed in regard to Mr. Gandhi. “His brain power is much superior to most of those about him, and he is master in his own house.” While he appreciates the Indian mentality which gave Mahatma Gandhi so great a hold on the mystic soul of India, he says that in

America he would be merely a curiosity round whom "the long-haired men and the short-haired women would gather" and console him because no one appreciated him. The cameo of Sir George Lloyd—"with the face and delicate emotions of a poet"; "always courteous, but unyielding"—is no less apt than his appreciation of Lord Ronaldshay as having given during his whole régime in Bengal a masterly exhibition of statesmanship.

Mr. Van Tyne's general conclusion, like that of so many observant and informed Americans, is highly favourable to the British records and aims in India. By its fairness and impartiality it should serve at least to bring home to a public in America, apt to be too receptive of sensational anti-British propaganda, the complexity of the problems confronting the British and Indian administrators. As Mr. Van Tyne caustically puts it, editors of American radical journals "may sit in their stuffy studies, stew in their ignorance, and tell England how to rule India, but there are conditions and complications their philosophy never dreamed of."

BEHULA: THE INDIAN PILGRIM'S PROGRESS. (Calcutta: Messrs. R. Cambray and Co.) Rs 2.

(Reviewed by J. B. PENNINGTON)

It is difficult to know how to deal with such an amazing story as this. The exaggerated language reminds one of (and almost justifies) Macaulay's well-known criticism of Hindu literature. Captain Petavel indeed speaks of it as "revealing the soul, not of the Hindu only, but of man generally," and argues that Hinduism and Christianity are "at one in the use of symbolism in religion"; but the Cross is a simple symbol, and, even so, is liable to great abuse by the ignorant. How the modern Hindu can derive any satisfaction from studying the amazing miracles of which this story is compounded passes all understanding. Miracles which, in the lifetime of many of us still living, used to be accepted as infallible proofs of the Christian religion, are now, in the Anglican Church at any rate, and even in the unreformed Roman branch of the Catholic Church, the great difficulty in the way of those who intelligently accept the essential truths of our gospel, believing as they do (with St. James) that "pure religion and undefiled" (by idolatry, or even excessive symbolism), "is to visit the fatherless and widow in their affliction and to keep himself unspotted from the world," or, in other words, to carry out the "social service" which the Vice-Chancellor of the Calcutta University in his very striking Foreword says is Captain Petavel's "practical creed." And, after all, as the old prophet says, "What doth the Lord require of thee but to do justly and to love mercy and to walk humbly with thy God?" Will the Lord be pleased with thousands of rams or with ten thousand rivers of oil?—or, as we might say now, with golden images and gorgeous temples full of sensuous music and reeking with intoxicating incense? Those are not the oblations which please the Lord. "To what purpose is the multitude of your sacrifices unto me? I am full of the burnt-offerings of rams and the fat of fed beasts" (while the poor are living, or starving, in slums). "Bring no more vain oblations; incense is an abomination to me. . . . Your new moons

and your appointed feasts my soul hateth ; they are a trouble to me. I am weary to bear them. Wash you, and make you clean ; cease to do evil, learn to do well ; seek judgment, relieve the oppressed " (who live miserably in slums), "judge the fatherless, plead for the widow," etc. In fact, make the whole of England into one great Garden City !

"Heaven won by the faithful discharge of duty on earth" is not an exclusively Hindu ideal ; it is the basis of all true religion, as St. James says, and it necessarily involves the sacrifice of self, as Christ taught us by the example he gave us of supreme self-sacrifice as well as by constant precept. Behula's splendid act of devotion to her husband, by which she also wins Heaven, would surely have been more effective as a story if it had not been protracted to such intolerable length, and if the language had not been overloaded with those details of barbaric pomp so dear, apparently even yet, to the Hindu mind.

It is, of course, a very small thing for a Hindu to believe that after his hero, Chand, had been reduced to absolute penury he should still be able to carry out his son's nuptials even more magnificently than he could have done in the time of his greatest prosperity ; but even fairy tales should have some regard to verisimilitude, and should not surfeit us with impossibilities.

MEMORIES OF FOUR CONTINENTS. By Lady Glover. (*Seeley, Service.*)

(*Reviewed by* LADY MUIR MACKENZIE.)

It has been said, "Oh that my enemy would write a book!"—but it is another matter when a friend writes a book, and by a good chance it arrives with a request, "Please review this book."

In this case it has been a real pleasure.

I have known Lady Glover for many years, and have not seldom found myself involved in some pleasant adventure, big or small, inspired by her optimistic and cheery example.

Some of the most interesting chapters in the book refer to Lady Glover's visit to India, and thither I accompanied her, fate decreeing that owing to the journey I was to spend many years east of Suez.

The book opens with stories of Ireland in the good old days, when the Moonlighter was only a mild sort of scout, showing the way to the Sinn Feiner of later days. The author tells many amusing stories. She knew the famous Archbishop Trench, and tells how she saw him officiating at a confirmation, where the majority of the young people who intended to be confirmed were composed of some sixty lads from a naval training ship. The Archbishop laid great stress on the importance of avoiding little sins, such as the bad habit of reading novels in bed, hardly a temptation to a bluejacket.

A good story is told of the witty judge Lord Morris. He was dining at Dublin Castle with Lady Aberdeen, who observed, "We are all friends and Home Rulers here to-night." Whereupon Lord Morris replied, in an exaggerated brogue:

"Then axing your pardon, your Excellency, let me tell yer there's no

Home Rulers in this room, barring yerself and those rascally hired waiters."

The authoress tells rather prettily how she, a young girl leading a pleasant uneventful life, left the trivial easy way to follow the distinguished man she married, Sir John Glover, along the difficult road of Empire building. She speaks of the wrench of leaving Ireland, but that "if the right man comes into a girl's life, a man whose personality is greater than any she has met before, whose object in life is one of highest purpose, and whose outlook is different from that of an ordinary everyday man of leisure, she throws her lot in with his and never looks back with vain regrets."

This is the story of many an English girl's life, and because she is willing to back the man she has chosen through thick and thin, we must, as a nation, ever hold our own as colonizers and pioneers.

The description of life as a Governor's lady in Newfoundland, our oldest Colony, is charming, and makes one remember how Francis Bacon, in 1610, played a leading part in the foundation of our Colonial Empire.

No less interesting becomes the narrative when Sir John Glover moved from the ice and snow of Northern America and became Governor-in-Chief of the islands in the Caribbean Sea. Here at Government House, Antigua, sledge and skating gave place to sauntering under palm trees, and fur coats were exchanged for tropical attire.

Since the death of Sir John, Lady Glover has travelled much, and observed much, in many parts of the world, and her observation and conclusions are entertaining and instructive.

She notes how the Crown binds the great Empire together like one big family. "This is a feeling absent in Republics"; to me they seem like a house without a head run by a housekeeper.

All pictures of English society before 1914 have become rather precious, and the authoress gives a particularly illuminating and diverting account of three reigns.

Altogether "Memories of Four Continents" will well repay the reader, who will read the last page with regret, saying to himself, "There was not a dull page in the whole of that book."

FAR EAST

LA CONFÉRENCE DE WASHINGTON. (Avec une carte en noir). Léon Archimbaud, Député, Rapporteur du Budget des Colonies, Membre du Conseil Supérieur des Colonies.

(Reviewed by BRIGADIER-GENERAL C. D. BRUCE, C.B.E.)

As a full, yet concise and extremely interesting, account of the Washington Conference, the work under review is of special value.

Opinions will for some time differ as to the precise value of the Conference to the world in general. But in order to really understand what took place, some such account from one evidently behind the scenes is essential. M. Archimbaud leaves little to the imagination.

It is especially interesting to compare some of the opinions at the Conference. Addressing the American Senate, when presenting the final result of the Conference to that not entirely sympathetic body, Mr. Harding, the late President of the U.S.A., is reported by M. Archimbaud as saying: "Quelles que soient les restrictions mentales qui aient pu exister, ou les doutes qui aient pu s'élever, car il s'agissait dans bien des cas d'une tentative nouvelle, toutes les puissances sont venues à la Conférence sachant qu'elles se trouveraient en présence de données très pratiques touchant leurs relations internationales. Elles avaient tout à fait en dehors de la grande réalisation de la paix du monde, un intérêt mutuel à aboutir et on est parvenu rapidement à des accords pratiques. Si la Conférence a, ainsi qu'on l'a dit, initié une nouvelle école mondiale de diplomatie, laissez lui ce titre. Cela indique les buts poursuivis dès le commencement, et cela a ouvert la voie à leur réalisation. Les puissances réunies à la Conférence ont pris le problème du Pacifique tel qu'elles l'ont trouvé en fait. Elles se sont attachées à des réalités par un accord volontaire et unanime; elles ont ajouté aux assurances de l'humanité et elles ont fait progresser la paix internationale d'une façon qui permet de bien augurer de l'avenir."

Mr. Hughes, American Secretary of State, M. Archimbaud tells us, "déclarait modestement que la Conférence avait sauvé le monde du désespoir."

M. Archimbaud, on the other hand, himself reflects: "Quand on lit ces belles périodes si bien balancées où sont exaltées toutes les vertus, où la paix, le droit, la bonne volonté et la tolérance entre nations sont prêchés avec une ferveur évangélique, et quand on se remémore toutes les 'sales cuisines,' toutes les vilaines opérations dont Washington a été le témoin, quand on compare la beauté et la noblesse des sentiments exprimés à la vilénie et au caractère mercantile et 'profiteur' de bien des actes qu'ils sont censés avoir inspirés, on ne peut se défendre d'un certain malaise en voyant les travestis dont peut parfois se trouver affublée la chaste nudité de la vérité."

To fully understand these divergent points of view it is necessary to clearly grasp the original aims and objects of Mr. Harding's Government in sending out invitations for the Conference. If these are correctly reported, the chief aim was undoubtedly to break up the Anglo-Japanese alliance. In the doing, the British delegates and Lord Balfour who led them were placed in a serious dilemma. When finally a way round had been found in the new "Four Power" treaty, it was owing entirely to Lord Balfour's well-known *savoir faire* that the act was at least gracefully performed. "Quand," M. Archimbaud writes of Lord Balfour's fine tribute, "deux nations ont été pareillement unies pendant vingt ans, elles ne peuvent pas se tirer le chapeau l'une à l'autre et se quitter poliment comme deux étrangers qui ont voyagé ensemble quelques heures dans le même train."

Something more united them, continues M. Archimbaud: "Et M. Balfour, redevenue première manière, de jeter sur la fosse de l'Alliance japonaise des brassées de chrysanthèmes mélancoliques en les accompa-

gnant de regrets du genre de ceux que fait le galant volage à la maltresse qu'il abandonne. "Je ne t'oublierai jamais!"

Who but a Frenchman could so wittily describe the aim and object of the Washington Conference?

But there is more, far more than this, in the clever summary of America's attempt to reduce naval competition in the Pacific and at the same time to keep Japan's hands off China.

As an account of that "unique" occasion, together with many of the side issues which arose, the book is well worthy of being translated into English.

THE NEW JAPAN. By J. H. Cousins. (Madras: *Ganesh*.) 6s.

(Reviewed by STANLEY RICE.)

Theosophist, poet, man of letters, artist, and Irishman, Mr. Cousins brings to the study of Japan qualities well suited to sympathetic treatment but ill-adapted to discriminating criticism. The title of the book is a little disappointing. One was led to expect, not indeed a political treatise, for Mr. Cousins does not write such, but a deeper insight into the changed outlook of the Japanese since they grafted Western institutions upon their Eastern polity. We are given instead something in the nature of a causerie on tea parties, tram rides, Japanese houses, Fujiyama, Tokyo, rural Japan, University life, friends European and Japanese, painting, music and the drama—not to drag the list out to an intolerable length. Yet through it all, if we may take Mr. Cousins' observations at their face value, we can discern that the everyday life of Japan, its special customs, its dress, and its habits have changed but little. What there is of change is superficial, and according to Mr. Cousins the change is generally for the worse. But here one must enter a "caveat," since a Theosophist of the school of Mrs. Besant and an evident admirer of Arabindo Ghose may be expected to exalt the East at the expense of the West, and the tale loses nothing when it is told by an Irishman. To Mr. Cousins, first and foremost a man of culture, Japan was one artistic delight—to the eye, though not to the ear, and certainly not to the nose. He, however, detected in what might be called the more conscious art of pictures an absence of originality in the classical school, and in a great part of the modern a slavish and by no means successful attempt to imitate the West. As for the music, he obviously could not appreciate the native kind, but that is no matter for surprise.

Mr. Cousins carries his enthusiasm for all things Oriental to an extravagant pitch. Granted that tramways and electric wires are not things of beauty, is it not hyperbole when a man quarrels with his pyjamas? After all, the abstract conception of sheer beauty in all things is unattainable, or Mr. Cousins would have thrown himself out of his railway carriage by way of protest against its ugliness.

His experiences were interesting and are told with vivacity, if here and there one is disposed to quarrel with the style. Was it really necessary to speak of plain South America as "the southern half of the great lanky

continent which bears the name of Amerigo Vespucci"? Apart from such blemishes, the book has a charm of its own as the record of an unusual experience, but it was a pity to call it "The New Japan."

THE NEW SOCIOLOGY*

THE theme presented is briefly that current ills and present discontents are likely to overwhelm us. We cry in vain to politician, magnate, and economist, but there are other and more potent aids. Religion kindles a fire in the heart. It blazes a message of redemption through sacrifice. The voice of science is cold but clear. It calls for diagnosis before treatment. It bids us explore before we exploit. If science and religion were to march hand in hand, could they show a way through our present troubles? Could they make a better world for the coming generation? If so, science and religion must be yoked in double harness. For lack of this partnership the post-war schemes for "reconstruction" have broken down. Their failure has resulted in bitterness and apathy. Men had imagined they fought for transition from an era of war (open or latent) to one of peace militant and constructive. To-day, in a mood of disillusion, the nations are polarizing towards reaction or revolution. Is this the inexorable choice before us? What better way does religion indicate and science explicate? Where and how does it start? Whither lead? To find answers to these questions, set them out in plain language, and exhibit their message as a realizable vision of life for the people is the aim of this remarkable book. The writer asks: "Wherein do we most fall short to-day?" Assuredly, he replies, *in vision of life at the full*. For succour in both the visioning and the realizing of life's powers and perfections we have two grand sources. They are religion and science. Religion offers richness and purity of inner life, or grace of spirit. Science offers knowledge, or command over things. For redemption and fulfilment we need the gifts of both religion and science, and in fullest measure. To modulate between the grace of religion and the knowledge of science is the office of literature, art, music, poetry. Their heartening warmth aids the layman to light his lamp of vision. In its illumination he may learn to mate the masteries of science with the mysteries of religion. Only so can we hope to humanize the machine industry and its demiurgic associates, the credit system and centralized power. How to pass from our mechanical and pecuniary culture to a more vital and spiritual mode of life?—that is the question of this new sociology. Its provisional answer is sketched in this book: The reviewer must express gratitude and surprise at this standpoint, so different from any with which he is acquainted, that the claim to constitute a new sociology is well justified. In this book we rise above the mere economics and politics of party warfare. It has at once a wider vision and a more concrete outlook. Space will not allow here to give the answer to the problems it raises. For that the reader must be referred to the book itself. To our mind its appearance should mark an epoch in sociological thought.

* "Science and Sanctity." By Victor Branford. (*Williams and Norgate*.) 10s. 6d.

SHORTER NOTICES

JAPANESE CIVILIZATION: Its Significance and Realization. By Kishio Satomi. With portrait. $8\frac{1}{2}'' \times 5\frac{1}{2}''$. Pp. xi + 238. (Trübner's Oriental Series, *Kegan Paul*.) 10s. 6d. net.

All those who would understand modern Japan should study this work. It is an exposition of the doctrine of Nichirenism and its relations to the Japanese national principles. As Mr. G. F. Barwick remarks in the Preface: "The Nichirenians count their temples by thousands and their adherents by millions."

THE EAST INDIA TRADE IN THE SEVENTEENTH CENTURY IN ITS POLITICAL AND ECONOMIC ASPECTS. By Shafaat Ahmad Khan, LITT.D. $9'' \times 6''$. Pp. vii + 325. (*Oxford University Press*.) 14s. net.

This volume, which is in effect a chapter in the history of Free Trade, is published at an opportune moment when India's tariff policy is being discussed. As in History, so in Economics, no country can be understood without study of its past.

BOOKS RECEIVED

To the Alps of Chinese Tibet. An account of a journey of exploration up to and among the snow-clad mountains of the Tibetan Frontier. By J. W. Gregory, D.SC., F.R.S. With many illustrations and maps. $9'' \times 5\frac{1}{2}''$. Pp. 321. (*Seeley, Service*.) 25s. net.

The Mystery Rivers of Tibet. A description of the little-known land where Asia's mightiest rivers gallop in harness through the narrow gateway of Tibet, its peoples, fauna and flora. By Captain F. A. Kingdon Ward, B.A., F.R.G.S. With many illustrations and three maps. $9'' \times 5\frac{1}{2}''$. Pp. 316. (*Seeley, Service*.) 21s. net.

Studies in Religion, Folklore, and Customs in British North Borneo and the Malay Peninsula. By Ivor H. N. Evans, M.A. $9'' \times 6''$. Pp. 299. (*Cambridge University Press*.) 20s. net.

Sous les Manguiers: Légendes du Bengale. Traduction d'Andrée Karpelès. Quinze dessins hors texte d'après des miniatures anciennes et 36 bandeaux et culs de lampe. $6\frac{1}{2}'' \times 5''$. Pp. 157. (Paris: *Bossard*; obtainable through East and West, Ltd., London.) 3s. 6d. net.

In connection with the Historical Section, Mr. H. R. Das has sent the following note: "In the course of my research concerning the Embassy of Sir William Norris, I found a few Persian letters in the archives of the India Office. These letters are consecutively numbered, and written from Surat, Bombay, and Masulipatam. They contain information about Sir William's mission, specially in the letters of President Colt to Dianatt Khan; Sir John Gayer to Sir William Norris and Aurangzeb; Dianatt Khan to Aurangzeb; Sir William to Dianatt Khan; Asad Khan to Dianatt Khan and Yarelebeg to Dianatt Khan; and also a letter to Rustomjee, the broker of the new East India Company. The contents of these letters will be published in my book."

Owing to pressure on our space, the Historical Section has been held over until the next issue, as well as Mr. Arthur Vincent's story, "The Children."

THE LEAGUE OF NATIONS HEALTH ORGANIZATION*

By F. R. SCATCHERD

I. THE NATURE OF THE LEAGUE HEALTH ORGANIZATION

THE League is not, as some imagine, an institution having a separate existence of its own. It is an association of States, pledged by signature "to co-operate in matters of international concern."

Thus the League Health Organization is only a special application to health questions, "of the whole organized attempt to put international relations on a firmer basis . . . an attempt to meet real needs in a common-sense way."

Article XXIII. paragraph (f) of the Covenant states that members of the League shall

"take steps in matters of international concern for the prevention and control of disease."

As a result of various conferences, it has been decided that the work of the Health Organization is:

"To advise the Council and Assembly of the League . . . to act as a clearing house for information on public health questions, and finally to help in bringing about the international agreement necessary for all executive action in public health matters."

This may conjure up fearful visions of compulsory inoculations with deadly sera and ghastly germs, but as "inter-governmental health work cannot encroach on the activities of national health administrations," it behoves each country to choose representatives who are keen to preserve personal liberty in this as in other respects, to the fullest extent compatible with the general welfare. Indeed, the League may prove to be the public's strongest protector and ally in the cause of medical freedom, as will be shown later on.

The League can, it believes, best achieve its objects by working in three main directions:

(a) By acting as a clearing-house for epidemiological intelligence, and as a central agency for collecting information on special health questions of international concern:

(b) By what may be termed "applied research work"—that is, the initiation of laboratory investigations conducted simultaneously, on a common plan, by institutes all over the world, and directed to securing the application of the results of this research.

(c) By constituting the League the Agent for fostering mutual understanding between the various health administrations, initiating agreements between these administrations, and executing common policies decided on by the national administrations at inter-governmental conferences.

II. THE LEAGUE OF NATIONS *versus* EPIDEMICS

Dr. Norman White, head of the Epidemic Committee of the League, has recently returned from an extended tour of the Far East. A recep-

* The nature and record of the League Health Organization (Information Section), Trafalgar House, Waterloo Place, London, S.W. 1.

tion was held by Lady Mond in order to enable leading physicians, surgeons, and epidemiologists to meet Dr. White. The following is a résumé of an interview accorded by Dr. White to a League of Nations Union official in London :

" Dr. Norman White sketched very briefly the work of the Epidemic Commission in Central and Eastern Europe during the past four years. He described the tragic health conditions prevailing along the Russian frontier during the winter of 1919-1920, when he and his colleagues first visited that area. In certain areas typhus was so prevalent that nearly every cottage contained dead and dying. Trains were arriving from Russia crowded with refugees, many of whom were in the last stages of typhus. Insufficient money was available to carry out the original plans, but steps were taken at once to assist the local authorities in overcoming conditions which made periodical reinfection inevitable. Hospitals and disinfecting stations were established at strategic points. The Governments of the States members of the League made voluntary contributions. The British Government headed the list of these subscribers, but even countries in great financial difficulty managed somehow to send money. Dr. Norman White emphasized the fact that the Epidemic Commission nowhere set up a new independent organization ; its efforts were directed rather to strengthening the health organizations in existence, to finding money and material, and generally to putting new heart into the work. Having assisted the solution of the most pressing problems on the frontier, the League's Commission then endeavoured to help Russia, and Dr. Rajchman and Dr. White visited Moscow. Perhaps the chief value of the work done in Russia was in the establishment of contact between Russian medical services and Western Europe. The position had now improved both in Russia and in the Border States. Cholera had almost disappeared. Typhus and relapsing fever seemed to be well in hand. On the other hand, malaria had assumed serious proportions, and was now claiming attention in the whole of the area.

" Dr. Norman White referred to the problem presented by the enormous number of Greek refugees pouring out of Asia Minor last year. He remarked that conditions amongst these refugees were peculiarly favourable to the outbreak of epidemics, and it was indeed fortunate that the League of Nations Epidemic Commission was in existence, and ready to help the local authorities in dealing with this menace. A vaccination campaign was promptly organized, and approximately 3,000,000 vaccinations against typhoid and paratyphoid fevers, cholera, and dysentery had been performed. How far these measures had contributed in determining the surprisingly low epidemic prevalence among the refugees was difficult to say, but he felt that this wholesale inoculation was a feature of great importance in saving the situation.

" Through lack of funds the League's epidemic work will be closed down this year ; but by a resolution of the last Assembly in Geneva a skeleton organization of the Epidemic Commission is to be kept in being, which will be available to intervene on the appearance of an epidemic likely to be of international importance.

" During his recent tour of the Far East Dr. Norman White visited nearly all the important ports in the Orient. He also journeyed into the interior of Manchuria, investigating conditions affecting bubonic and pneumonic plague. He was received everywhere in the most cordial manner ; almost everywhere it was realized that close international co-operation was essential to the success of measures taken to control the spread of the more serious epidemic diseases.

He was not in a position to discuss the conclusions of his report until it had been considered by the League's Health Committee, but he mentioned a few of the interesting observations he had made on his tour.

"Dr. White concluded by referring briefly to the geographical distribution in the East of bubonic and pneumonic plague, and to the possible explanation of epidemic manifestations of plague occurring in two such totally different forms."

III. THE LEAGUE AND THE NEAR EASTERN REFUGEES

Following upon the Smyrna tragedy in the autumn of 1922, refugees began pouring into Greece in such numbers that they soon totalled one-fifth of the entire population of Greece. The report tells us that they were mostly in a state of destitution and "in conditions permitting of no sort of sanitary control whatever." The inevitable followed in immediate and terrific epidemics of cholera, typhus, smallpox, typhoid fever, dysentery, and malaria. The Council appointed Dr. Nansen its High Commissioner for refugees, and of the monies collected Dr. Nansen, at the request of the Greek Government, allocated £5,000 for medical purposes. In conjunction with the Greek Health Ministry, and the addition of other funds from the Epidemic Commission, a preventive vaccination campaign was organized among the refugees. For administrative purposes, the camps were divided into two zones, with centres at Athens and Salonica. By April 1 last, some "1,574,585 refugees had been vaccinated against smallpox, cholera, and typhoid fever," leaving some 60 per cent. unvaccinated, with the ceaseless influx of fresh refugees from Constantinople and Asia Minor.

Imagination fails to picture the additional misery inflicted on these unfortunates, by, in some cases, a threefold vaccination. The League should be able to offer, or rather collect, information as to the fate of the 60 per cent. unvaccinated refugees. I know that many doctors died, and they would assuredly be among the vaccinated.

IV. LEAGUE ENQUIRY IN FAR EASTERN PORTS

With the sanction of the Governments involved, on November 3, 1922, the Health Committee sent a mission on a six months' journey of investigation to the chief ports in the Far East, in order to study the methods in use for sanitary, anti-epidemic and quarantine regulations. The special object was to prevent the spread of disease by sea-borne traffic. It is hoped that the information collected may serve as a basis for conference between the Powers concerned, for the purpose of co-ordinating and enforcing sanitary and anti-epidemic measures throughout the Far East, since, as the report says, "sea-borne diseases coming from the Far East have been the main enemy of sanitary authorities all over the world."

V. THE LEAGUE AND SERA AND SEROLOGICAL TESTS

Perhaps the most valuable and informative part of a highly instructive report is the section under the above heading. The layman who so confidently resorts to treatment by the newest sera, and is envied by his less wealthy friends for his good-fortune, has not the slightest notion of the risks taken and the infinitesimal chances of accruing benefit.

It may prove gravely disturbing to learn that agreement in measuring and testing the potency of anti-toxins has not yet been reached, that differences exist even in laboratories of the same country, and that these differences involve not only details but fundamental principles.

In connection with the Applied Research Work of the League is an interesting paragraph dealing with Biological Products, used as powerful drugs, such as digitalis, pituitary, and thyroid extracts, insulin, etc. Chemically they are variable and unstable,

"and their therapeutic properties bear no constant relation to their chemical composition." (Italics are ours.) "It is therefore generally necessary to standardize these preparations physiologically—that is, by the effect on a particular animal of a dose of standard size or some other method."

The bewildered layman may well rub his eyes and ask if he is dreaming. Do not rats and guinea-pigs differ in powers of resistance just as do their big human brothers? And what about the rabbit, who frolics unconcernedly, so it is said, after a dose of arsenic that would kill six men? Let him, however, be thankful that an international league of experts is looking into these very serious questions. And, more important still, let him not only watch its deliberations, but let him support it to the fullest extent in his power. If he can do no more let him at least join the League of Nations Union. Meanwhile, till these sera and anti-toxins, at the cost of untold anguish, human and subhuman, have been standardized, can we not find among the League experts men like Dr. William Ewart, Dr. H. Bellamy Gardiner, and Dr. Leonard Williams, or women like the late Lieut.-Colonel Flora Murray, M.D., and Dr. Isabel Ormiston, who, during the war, when almost all our own surgeons were on war-work, drew attention to the Handcock Method for the non-surgical treatment of nose, throat, ear, and eye troubles, with this strange result, that not only were the troubles alleviated, but the patients, adults as well as children, generally escaped the prevailing influenza and other epidemic disorders? This result was almost invariably appended to the medical reports of experimental cases, but public attention was drawn to the fact by a letter from Dr. Friend, of Christ's Hospital School, who, in "a long report of the different methods used . . . gave credit to the greatest number immuned (800), who, without inoculations, simply followed the Handcock methods, as described by Dr. Isabel Ormiston in *The Lancet* of August 24, 1918."

VI. THE INTERCHANGE OF PUBLIC HEALTH PERSONNEL AND INDIVIDUAL FELLOWSHIPS

This is a branch of the League's activities which was made possible by the generosity of the International Health Board of the Rockefeller Foundation. Already exchanges have taken place between Belgium and Italy, England and Austria, and a third interchange again in Italy, solely this time for the study of malaria. Other interchanges have taken place this year, but the report of them is not yet to hand. Enough, however, has been said to prove that the Health Organization of the League has fully justified its formation and merits the support and sympathy of all concerned.

THE ASIATIC REVIEW

APRIL, 1924

THE INDIAN BUDGET, 1924-25

THE Indian financial year ends on March 31, and the Budget is in the hands of the Assembly and before the public a month or so before the end of the financial year. The exact result of the year's operations is not therefore known at the time the Finance Member makes his statement, and even the final figures which are submitted to the Assembly at the close of the session do not give the actual receipts and outgoings of the year. This peculiarity of the Indian financial system is ordinarily a matter of no moment, as the probability of a surplus or deficit can fairly accurately be gauged when the nine or ten months actuals are known. On the present occasion, however, the estimated margin between the receipts and outgoings as arrived at in the revised estimates for 1923-24 is so small that, as Sir Basil Blackett himself observes in his statement, it is doubtful whether there will actually be a surplus or a deficit on the year's working. The revised estimates assume that the ordinary receipts will fall short of expenditure by only Rs. 38 lakhs. On the other hand, revenue is to receive the benefit of a windfall from the profits accruing from the control of enemy ships. India's share in these profits amounted to £3,250,000, and it is proposed to credit to the current year Rs. 244 lakhs, reserving the balance for special expenditure in 1924-25.

The year 1923-24 is thus the first year since the war in which the Indian Budget has balanced. Many of the expectations of the yield from taxation have, it is true, been falsified. The Salt Tax will yield Rs. 8½ crores against the Rs. 11½ crores which had been expected. The

falling off in the return from the salt duty is due to two causes: large over-issues of salt were made in January and February, 1923, by traders in anticipation of an enhancement of the duty in March, 1923; while in the later months of the current year, in anticipation of a reduction of the tax in March, 1924, dealers allowed their stocks to run down to the lowest possible levels. Customs also will fall short of the estimates. The cabled summary of Sir Basil Blackett's statement does not give any details of the yields under the several tariff headings; but, generally speaking, imports into India have in 1923-24 shown a reduction in value, and we may expect to find, when fuller information is available, that the falling off in the yield from customs duties is fairly distributed over all the major heads of the Indian tariff. This contraction in the Indian import trade is probably not due to any one particular cause. High world prices, enhanced Indian customs duties, and hesitation on the part of foreign shippers and manufacturers, who, in the light of their own experience, or of the experience of others of the slump of 1920, have thought it wisest to limit their engagements, have doubtless been the primary contributory factors in the reduction in the Indian import trade.

If the revenue has fallen short of expectation, expenditure has shown a corresponding reduction. We are so far without specific details as to the heads which have shown an improvement in this respect. It is possible that expenditure was over-estimated in the Budget for 1923-24, but to judge from Sir Basil Blackett's remarks on the military budget, it would seem that there have been effected very substantial economies in military expenditure, and that the lead given by the Retrenchment Committee has been vigorously followed up in the civil estimates. It is, in any case, abundantly clear that the Indian Finance Department have amply justified their demand in March, 1923, for increased revenue. The purse-strings have, it is evident, been drawn tight on all departmental expenditure.

The Indian Finance Member's statement probably included a detailed reference to the savings effected in interest charges. The floating debt in the form of Treasury bills is now negligible. As against Rs. 22 crores of borrowing in this form outstanding on March 31, 1923, there are now only Rs. 2 crores, and it would seem that this form of borrowing will probably totally disappear from the Indian financial system. If this anticipation is realized, India will have taken the lead in discarding one of the financial makeshifts which the exigencies of war finance forced on Governments. There is, of course, no inherent evil in a Government borrowing on its three and six months' notes of hand; and indeed so long as bills so issued are only intended to tide over the lean months of the year, and are automatically paid for from, and are limited to, the revenues which they anticipate, they are probably a legitimate and correct method of finance. The risk lies in these bills being created for other purposes, when they become, as in Germany and in France, a source of danger to the currency, and are in effect not truly distinguishable from paper currency, save that every holder of such bills can and does in actuality claim and receive a varying rate of interest for the time that they have been in his possession. With the practical extinction of this form of debt, the way is now clear for a redemption or consolidation of the short-term debt, which was issued by the Indian Government during and since the war. We are told in the summary of Sir Basil Blackett's statement that the financial statement includes a detailed examination of the position of India's total debt, and that the Finance Minister laid stress on three important points. In the forefront he stressed, and rightly stressed, the essential necessity of establishing a definite programme for the redemption of debt, such programme to be dependent, naturally, on the purpose for which past debt had been raised and any fresh debt is to be incurred. For the present he proposes an annual provision of Rs. 4 crores for the repayment or avoidance of debt

during the next five years, additions to be made to this sum for any new debt incurred within this period. His second point lay in the anticipation of India being likely to be able to avoid creating any fresh external debt during the coming year, while he limited to Rs. 20 crores the probable demand by the Indian Government on the Indian investing public. Thirdly, he gave expression to the hope that the terms on which this limited loan would be issued would be more favourable to the Indian Government than their recent borrowings.

These are all three points of first importance both directly and by implication. There can be no real redemption of debt other than that resulting from the application of a surplus of revenue over expenditure, and it may be confidently assumed—looking to the school of finance in which Sir Basil Blackett has acquired his experience—that the programme of debt redemption which he proposes to establish will have for its basis a balanced Budget. The Budget for 1924-25, which is to include a provision of debt redemption of Rs. 4 crores, besides, in addition, allowing for a remission of taxation, indicates an improvement in Indian finances which no one would have dared to predict two years ago. The return annually to the Indian investment market of 4 crores released from their immobilization in Government securities will tend to cheapen the cost of capital for industrial and commercial finance. Again, the reduction in the rate of interest at which the State has been borrowing will reduce the charges payable by the taxpayer, will have its reflex on the rate of interest payable on other securities, and will materially assist the Provincial Governments in their local development schemes. Finally, the avoidance of foreign borrowing, which in recent years has necessarily been on a very large scale, will lighten the task of the Indian Treasury in respect of its remittances to the Home Treasury.

Let us look for a moment at the maturities of short-term debt which will shortly have to be faced. There are out-

standing some 170 crores of bonds, initially issued for a term of ten years or less, of which all but 30 crores carry interest at 6 per cent. In 1925 the maturities are not serious, and amount to under 4 crores. In 1926, however, there will fall due as many as 38 crores of bonds issued in 1921; and though the maturities of 1927 are not as heavy, they are still quite considerable at just under $27\frac{1}{2}$ crores. Both these series have for some time met with a keen and continuous demand from banks and commercial and financial institutions. Their early redemption date and their high yield, even at their present market quotations, have made them particularly attractive as an investment for spare funds in the slack months of the year; while in the tight money period they can always be brought into use as cover for advances, the loss of interest when such advances are subjected to a high bank rate being more than balanced by the high yield which they earn during the monsoon months. In 1928 there fall to be repaid a large block of some $25\frac{1}{2}$ crores of $5\frac{1}{2}$ per cent. War Bonds. In all, these three years will account for some 95 crores of the short-term debt. Now, to put the matter in a very general way, and, of course, without suggesting that these bond issues, when originally made, were definitely made with the object of tiding over any particular year's deficit, the fact remains that the amount of debt which needs to be repaid in the coming and three subsequent years practically corresponds to the aggregate of the deficits from 1919 to 1923. Looked at from this standpoint, the sagacity and prevision which have inspired the policy of establishing a definite programme of debt redemption in the next five years will without doubt receive the recognition that it richly merits. It is a policy in strict accord with the high traditions of financial purism which have always in the past been a feature of Indian financial methods, and which have resulted in the high rating of India's credit. Note also the limitation to 20 crores of the amount of the coming year's borrowing, the effect of which must be to enable the Indian

Government to obtain less onerous terms of interest. We shall not be far from the mark in anticipating that this year's loan will take the form of a further addition to the Funding Loan of 1945-55, originally issued at 95, carrying interest at 5 per cent., which now stands at 98½, with, perhaps, as last year, a ten-year bond issue, to be brought out at par, also with interest at 5 per cent.

Apart from their effect on the standing of the Indian Government loans, these measures necessarily carry with them the implication that a marked improvement has set in in the condition of Indian currency. This, indeed, is already reflected in the periodical returns of the Currency Department. The note issue has now a metallic backing of 56 per cent., and though the sale of £2,000,000 of gold in India has resulted in a corresponding reduction of the gold backing to the note issue, the Government have placed 14 crores of British Treasury bills in the currency reserve, as cover for the note circulation. Foreign balances, particularly if held, as they are in the present case, in the form of bills maturing within three months, are an ideal backing to the currency of a country like India, whose exports so largely exceed its imports. And there is all the more reason why the State in India should avoid the costly luxury of piling up a large inert gold and silver backing—when once the safety of the currency is assured—since the individual Indian is still devotedly attached to the possession of bullion, and can safely be trusted to secure that his toil and skill as a producer will at least in part be paid for in gold and silver. The large imports of bullion into India in the current year sufficiently prove that India has not been denied in her demand on the world's production of precious metals. A novel feature in the imports of gold is the direct importation into India from Durban of gold from the South African mines. This change, which has come about by the introduction of arrangements in South Africa for the refining of gold, has robbed London of its monopoly as an entrepôt for the

physical handling of the gold production of South Africa ; and the geographical distribution of India's bullion imports, as it will emerge from the trade statistics, will show striking divergences from the past.

We have left to the last the references to the course of rupee exchange and to the separation of railway finance from the Central Government's general Budget, which occur in the cabled summary of the Finance Member's statement. The reference to rupee exchange is very brief, but doubtless the matter will be found to have been more fully treated when the full financial statement reaches this country. The record of the year's transactions in regard to exchange has been marked by the introduction of a system whereby the Indian Government, through the Imperial Bank of India, has been a buyer of sterling in the Indian exchange market concurrently with the sale by the Secretary of State of Council bills and T.T.'s in the London market. The system has worked well and without friction, and the Indian financial authorities have shown much critical and sound judgment in their operations. They have so far remitted to the Home Treasury during the year £28,364,000, of which £12,000,000 represent remittances on behalf of the paper currency reserve, the balance being on account of Home Treasury revenue and capital transactions. Sterling purchases in India represent the bulk of these remittances, over £12,475,000 of sterling having been purchased in India, as against sales in London of Council bills amounting to £8,738,000. The balance of the remittances is accounted for partly by the taking over in London of sterling which local authorities, such as the port trusts, municipalities, and other large borrowers, had raised in London by way of loans, and wished to transfer to India, and partly by the transfer from the paper currency reserve in England to the Home Treasury. Since the Budget for 1924-25 makes no provision for a sterling loan, it would seem that the Ways and Means programme of the Home Treasury is in the year to come

to be financed by means of remittances from India. This indicates that the Indian Government will be a consistent purchaser of sterling, and though the sale of Councils in London has recently been suspended, this suspension can only be temporary, and the sales will presumably be resumed when and if a demand should spring up for rupee exchange in London. For the purpose of the Budget a rate of exchange has to be paid for the conversion of sterling transactions into rupees; a rate of 1s. 4 $\frac{3}{4}$ d. has been taken. This, however, as Sir Basil Blackett points out, is a purely arbitrary rate, and must in no way be regarded as even an intelligent anticipation of the probable course of exchange. There are so many factors which influence the Indian exchange that any prediction of its course cannot fail to be little better than guess-work.

The separation of railway finance from the general Budget is an interesting and far-reaching departure, on which judgment must be suspended until fuller details are available. Briefly, the new arrangements contemplate that the taxpayer shall now be treated as a preferential shareholder in the railways; on the capital he has invested in the commercial undertakings he is to receive a sum calculated to pay the interest he himself has to pay for the sums so borrowed by him in the market; and additionally he is to receive a fixed annual dividend and 20 per cent. of any surplus profits. This profit-sharing arrangement is to apply only to the commercial railway undertakings, from which it is to be inferred that the charges in respect of the strategic and frontier railways fall to the taxpayer's account. What is not clearly brought out in the cabled summary of the Budget is how the financing of fresh capital expenditure on railways is to be effected. It is, of course, true that in the past all profits from their railway undertakings have gone to swell the Indian Government's general revenues, and this was only right and correct, seeing that for years the general revenues had to bear the losses on railway working. But the main grievance of the railways has

always been directed to their inability to secure what they considered to be a fair share of the funds available for capital expenditure. Projects, in themselves desirable and expected to be fully remunerative, had to be held back pending allocation of capital funds, and the cry was that the borrowing policy of the Finance Department was not characterized by that boldness of conception which should inspire the policy of a progressive railway undertaking. The fact was that the Indian Government's borrowing was conditioned, and naturally so, by a desire to pay the lowest rate of interest possible, and by a disinclination to attract fresh capital funds by paying a rate of interest which would react on the loans already issued. A railway undertaking can, and is expected to, pay more for its capital requirements than a Government; yet the Government of India, though the owner of a large railway system, could not afford to go into the money market and borrow at a suitable rate for its railway projects. It is not clear how this very solid difficulty which has stood, and still stands, in the way of progressive railway development in India is to be surmounted under the new arrangements. They have, however, the great merit that the interest of the railways in reducing their operating costs and in increasing their receipts will be greatly stimulated, since they themselves will share in any increase in their net earnings; and having regard to the decision of the Indian Government to adopt the system of State ownership and State working of the great railway systems of India, such as the East Indian Railway and the G.I.P. Railway, this modification in the method of distribution of profits will without doubt be welcomed by those by whom the change over from Company to State management was viewed with misgivings.

The fate of Sir Basil Blackett's Budgetary proposals he has himself left in the hands of the Assembly, and but for the fact that a certain section of the Assembly intend again to raise this year, as they did last year, a constitutional

issue which can have no relevance, direct or indirect, to the financial and economic suitability of the measures submitted to their judgment, the issue should not be in doubt. The salt duty can be reduced in the coming year; if it is reduced the provincial contributions must stand at the figures fixed in the Meston award; if it is allowed to stand at the present level, then a much-to-be-desired relief can be made in the contributions which the provinces make to the Central Government. If the Assembly, with whom the decision has been left by the Executive, are genuine in their demand to be invested with financial responsibility, an admirable opportunity has been offered to them to translate this desire into actual performance. It is, however, not certain that this very plain and clear-cut issue is not going to be obscured by the adoption by the intransigent section of the Assembly of a line of policy conceived with the deliberate intention to block effective constitutional government and designed to raise the wider question of the political relations between India and Great Britain. G.

A REVISION OF THE INDIAN REFORM ACT

BY SIR THOMAS BENNETT, C.I.E.

I HAVE been asked to give my views upon the desirability of an amendment of the Indian Reform Act of 1919. My answer to any question that might be put to me on that subject would be to ask what kind and degree of amendment was in contemplation, and at what time it was intended that the change should be brought about. If I am asked whether I regard the Act of 1919 as a perfect piece of legislation I should reply with a reasoned negative. One need not go amongst the Indian extremists, who for the last three years have been, in the words of a recent commentator, "throwing spans into the machine," for evidence that the measure, in many of its operations, is capable of amendment and adjustment. I doubt if any of the Governments who are working the provincial legislatures would have any difficulty in suggesting changes, either in the Act or in greater degree in the Statutory Rules, which are almost as important as the enactment itself. The Government of India, in the debate in the Legislative Assembly last month, any more than the Imperial Government speaking through Lord Olivier in the House of Lords, have not countered the demands of the Indian malcontents with a forbidding *non possumus*. They have taken their stand upon the Act, but they agree, nevertheless, to make, in Sir Malcolm Hailey's words, "a serious attempt" to investigate complaints into its working, and to seek for means for remedying its shortcomings. It will be easy to show that this is as far as any Government conscious of its responsibilities towards India could go.

The attack upon the Act has been directed along various

lines. I wish that Lord Olivier, in quoting Colonel Wedgwood's condemnation of the Ghandyite refusal to go into the councils, had had a word to say about that gallant member's own attitude towards the reforms. It makes one thankful that neither he nor Mr. Spoor was sent to the India Office when one remembers how these gentlemen poured contempt upon the measure before it left the House of Commons. Not a word had either of them to say which would have commended it to the people for whose benefit it was intended. "This trumpery thing" one of the most truculent of the Indians who have since obstructed it called it in giving evidence before the Joint Committee, and Mr. Vallabhai Patel and his school needed no Parliamentary backing. They declared war on the scheme from the beginning. The idea that the reforms might conceivably be turned to account for the benefit of the Indian peoples has never entered the minds of the wild men who flocked in thousands to the Congress meetings. Not once, so far as can be remembered, was it suggested, for example, that the scope of the scheme might be widened by lowering the franchise. It would have been strange, indeed, if the minds of the malcontents had turned in that direction, for such an extension of the electorate would have brought in new millions, who might have disputed their authority.

The policy of abstention from the councils, taken up at first with enthusiasm, and with an unquestioning assurance that it would bring the Government of India to their knees, failed because on second thoughts its authors feared lest it should after all lead to the capture of the councils by men who were prepared to work them. And then there was the awkward fact that not only were the councils functioning, but they were functioning to the obvious advantage of the country. The new policy, therefore, was to enter the councils, and then to use the position thus captured in order to hinder legislation. We have seen this policy at work in the legislature of the Central Provinces, where, with monkey-like irresponsibility, a Swarajist majority has

thrown out measure after measure, in few cases on reasoned grounds, but, it would almost seem, merely for the fun of the thing. The story of what has been happening at Nagpur has its lessons, but it would be possible to take too serious a view of it. We must remember that the population of the Central Provinces is in a specially large degree agricultural, that the political elements in the community are scarce, and that the circumstances of the province are helpful to the activities of a small class of politicians bent on obstruction and mischief-making. Evidently the Government of the Central Provinces have an awkward problem to deal with, and one would be reluctant to prescribe a solution. Is it to be found in Section 52A (2) of the Act, which provides that the Governor-General in Council may declare any territory in British India to be a "backward tract," and may, by notification, with the sanction of the Secretary of State, direct that the Act shall apply to that territory subject to such exceptions and modifications as may be prescribed? The exuberant spirits in the Central Provinces Legislature, who have done their best to make the Act of no effect, would have no ground for complaint if their powers under the Act were severely modified. There is no reason why what Lord Olivier called "administrative sabotage" should be triumphant even where, as in Bengal as well as in the Central Provinces, a Swarajist majority has laid itself out to work mischief.

We cannot be too thankful that the policy which some prominent members of the Labour Party have in the past commended to Indian politicians has been specifically and uncompromisingly repudiated both by the Prime Minister and by the Secretary of State for India. Exception has been taken to details in Lord Olivier's speech, and at Delhi, according to a telegram sent to *The Times* a day or two after the pronouncement was made, serious objections have been taken in official quarters to certain passages in it. But these may have been founded upon defects in transmission. However this may be, we have a Labour

Government in this country which within a month of succeeding to office has repudiated the unctuous doctrine of some of its followers that British rule in India is a thing that has to be apologized for, that the Act of 1919 is a plant that may any day be pulled up by the roots, and that a policy deliberately adopted by Parliament less than five years ago ought now to be thrown on a "round table" for a promiscuous junta to work their will upon it. How thoroughly the Government have rejected the evil counsels of these men will be best realized when it is remembered that a few days before the Secretary of State made his statement the Independent Labour Party issued a manifesto in which it was urged that the concession of full self-government "should be impeded by no claim that England is the rightful ruler of India." The definite answer that has been given to this and all similar pretensions is that His Majesty's Government stand by the provisions of the Government of India Act. The idea of submitting the question to a round-table conference is summarily rejected, and the establishment of full responsible government for India only three years after the institution of the reforms is condemned as a policy worse than perilous, and big with disaster to the people of India.

There is no need to point out what an immense advantage it is to have such a clean-cut definition of principle as is conveyed in this declaration. No one in India will misunderstand it, though some may resent it. They certainly will who have built on the expectation that a brand new constitution for India could be imposed as a result of a bargain by certain groups of politicians between each other and with the Government. Mrs. Besant has sedulously striven to gain acceptance for the idea that systems of government for India are to be cultivated on Indian soil by exclusively Indian growers. This may seem an easy and simple process, but it is one for which no warrant can be found either in the antecedents of the country or in the actual conditions of Indian political society.

Constitutions under an autocracy have been *octroyées* by monarchs or devised by a constituent Assembly, convened for that specific purpose. Or they may be conferred by the Legislature under the guidance of a responsible authority, seized of all relevant facts and having at its disposal the knowledge and experience of statesmen and officials of the highest authority. The British Parliament will not lightly divest itself of the responsibility which it has borne for India for well-nigh two centuries, and transfer its burden to the rickety shoulders of an authority so untrustworthy and so unknown to the law and Constitution as what is called a round-table conference. I may be told that the policy which the British Government have defined through the Secretary of State will be an unmerited disappointment of the expectations of the Indian people. "Unmerited?" What proof have the claimants to an immediate concession of full responsible self-government given of a capacity to rightly use the privilege? Three years is a short testing time for any Constitution. It is long enough to reveal defects in detail, but it has not been long enough in this case to afford proof of the fitness of the people who live under it to advance to the exercise of the infinitely larger powers which are now asked for. But something more than the testing of the Constitution itself is involved. The people need the test even more than the Constitution. "Not the machinery you have to work, but the spirit you are of is what matters," is a saying of Matthew Arnold's which Lord Morley commended to the consideration of all who have to do with India.

"The spirit you are of." What has been the spirit of the men who have told us that the Government of India Act is not good enough for them? To say that it has been ungenerous, vindictive, and unreasonable is to speak mildly. Churlish refusals to pay to retiring representatives of the King-Emperor the courtesies that have passed into a settled convention will be looked on by some as only bad manners. But good manners are of the essence of things

when a constitution has to be worked. Of more direct significance has been the sustained determination of the Swarajists to extend their opposition to the Act to all the operations of the administration. Civil disobedience, it is true, has not in form been resorted to ; but bad and disgracefully inefficient "national" schools have been set up, to entice the youth of the country from Government institutions, and a spirit of anti-civism has been propagated amongst the rising generation which must have as its first result the creation of an atmosphere fatal to loyalty and good citizenship. The three years in which the reforms have been in operation might have been turned to account for accustoming the people to the exercise of the privileges conferred upon them. The opportunities for guiding them through the first stages in political education would have been seized at once by leaders and teachers worthy of the name. But these opportunities have not only been wasted—they have been perverted to mischievous uses. From the extremists' own point of view even untold harm has been done. If we could imagine for a moment that things were to be speeded up now, and full self-government were to be achieved within a year or two, what sort of an electorate would be at the disposal of the leaders of political society in India? To paraphrase a famous declaration of Gladstone, it would be "the negation of good citizenship elevated into a principle of government." Ignorance, lawlessness, and egoism would be rampant, and even the raw material for building up a State would be wanting.

The attempts to institute a wholesale boycotting of British-made goods in India, and to deprive the country of her share in the splendours of the Empire Exhibition, have not been altogether successful, though they have brought into view petty antagonisms of a kind which cannot rightly have a place in the development of free institutions. But perhaps there has been nothing in the history of the movement more retrograde than the reference to a body of mullas of the question whether it was in

accordance with the Sacred Law for an orthodox Mussulman to take part in the making of the new Legislative Council. Surely there never was a more singular blending of old wine and new than this. Yet while some are thus lagging behind on the path of constitutional progress, what shall be said of the others, who insist that India has nothing to learn—that she has already shown herself capable of exercising all the functions of a great self-governing community?

The British Government will at first be severely censured in India for adhering to the declared policy of Parliament—the realization of full responsible government by stages. But they will find it worth while to cling with determination to that policy. Everything will depend upon that. The worst and the weakest thing that could be done would be to show a readiness to leave the time and the extent of further reforms to be questions for bargaining between Government and the men who from the first have been the declared enemies of the reforms. There remain only five years to the time fixed by Parliament for an enquiry into the working of the Act. The demand for hastening the commission of enquiry—which by the way is necessarily inconsistent with the proposal for a Round Table Conference—has come largely from men who from the beginning asserted that it was superfluous, inasmuch as India was already fully capable of governing herself. No competent authority has ever admitted that she was so capable. The shrewdest of her own politicians would deny it. A dispassionate review of Indian Parliamentary proceedings during the last three years would lead to the same conclusion. Nor can it be pretended that the British Government or the Government of India have spoken with an uncertain voice upon this vitally important matter. Taking their stand upon the fact that upon Parliament rests the responsibility for the welfare and advancement of the Indian peoples, they have claimed that Parliament be the judge of the time and measure of each advance that is made

towards responsible government. And what are the conditions which are to determine the decision? The declaration of August 20, 1917, was explicit on this point: "They must be guided by the co-operation received from those upon whom new opportunities of service will be conferred, and by the extent to which it is found that confidence can be reposed in their sense of responsibility." Here we have a bargain with the people of India—a unilateral one it is true, but one that binds Parliament at all events, for it was under obligations constituted by that memorable declaration that Parliament passed the Act of 1919. It would be trifling with the people of India if, having laid down its policy thus definitely, the British Government were now to say that the goal set up in 1917 should be moved forward to without delay, and without any regard to the conditions laid down for ensuring safety and avoiding disaster. To the protests which Lord Olivier's straightforward and courageous declaration has provoked there is an obvious and sufficient reply: "What co-operation have you offered with a policy meant to set your feet upon the path of full responsible government? You have hindered where you were invited to help. Wherein have you shown the sense of responsibility on which alone your claim to be entrusted with larger opportunities can rest?" To ask these questions, although no satisfactory answer can be given to them, is not at once to rule out from all prospect of taking part in the evolution of a liberal policy in India the factions who hitherto have obstructed all sane progress. There will still be an opportunity for them in the effort that is to be made to examine the working of the Act, and make it acceptable to all men of good will, to whatever party they may belong. Meanwhile, the truest friends of progress in India will hold to the general policy of the Act as it stands. They will not ask for a hasty extension of the principle of responsibility to new subjects in the provincial legislatures, for the transferred departments still provide as wide a field of activity as the Ministers can efficiently cover. Nor

need we at the moment endeavour to furnish an answer to the question that has been put to me, "Has the diarchy failed?" It will be time to answer that comprehensive question when we are ready with an answer to one of a more specific nature—namely, "Have the provincial legislatures done so well with the departments transferred to them that they can be safely entrusted with new responsibilities?"

INDIA'S PART IN THE BRITISH EMPIRE EXHIBITION

BY AUSTIN KENDALL

FROM the time of the Great Exhibition of 1851, India has participated in very many international exhibitions and has carried off a goodly proportion of the various rewards which were to be obtained. Expert Committees, operating from London, have got together, chiefly by purchase, a fascinating display of carpets, muslins, brass utensils and ornaments, and carved and inlaid wood screens and furniture. People have grown to think of articles of such nature—articles in the main ornamental or luxurious rather than useful—when India is mentioned. A certain small number of Englishmen have been coming and going in the Public Services and in the pursuit of mercantile activities. When the Territorial Battalions were sent to India during the war, a considerable number of additional Englishmen had the opportunity, which they would not otherwise have enjoyed, of making acquaintance with India, and of seeing something of her peoples and her interests. India, from its climatic conditions, is not the place where Europeans, except in a few isolated spots in the hills, can settle down and make their home after their work is done. The result is that, to the great majority at home, India is still somewhat of a mystery, full of tigers and cobras and Oriental despots! The writer remembers describing his adventure with a tiger which, in a beat, charged the elephant on which he was riding; the hearer's ignorance of India was shown by his remark: "How dangerous for the man who was leading the elephant!"

1924 will, it is hoped, go a long way to show the British

public, and the Dominion and Colonial visitors, that India is not a land of luxury and ease for the few, of poverty and ignorance for the many. In every sense of the word she has found herself. In a pavilion covering over 100,000 square feet, a pavilion which it is hoped will be the most impressive among the many British, Dominion, and Colonial palaces which will be seen at Wembley in 1924, she will have a display of her resources quite different from anything which has been seen before. Different, partly because the manner of her participation is different. From the time when the Honourable Mr. Chadwick outlined, in 1921, the principles which the Indian Government desired to adopt, it has been determined that this shall be India's Exhibition, organized and prepared in India, and not from a headquarters in England. Each province has an area, ranging from 7,000 square feet to 12,000 square feet, allotted to it; and a large number of the Indian states have secured allotments ranging from 5,000 square feet downwards. Within that allotment each province and state will show the very best it can do. It provides its own funds, builds and lays out its own court, and fills that court with its own products. It is not possible to say what unsuspected resources, in iron and steel, in wool and leather, perhaps, will be revealed, what surprises may be in store, not only for the visitor but even for the officials who are preparing the building in England and making ready to receive the loaded cases which have been pouring into the country since the beginning of the year.

Each province and state will have its own offices and its own salesmen; and, subject of course to such general and special regulations as will be necessary for the efficient management of the Indian Pavilion as a whole, will "run" its own court.

There are upwards of 37,000 miles of railway in India, over which in a recent year travelled over 486 million passengers; while the goods carried amounted to 86 million tons, besides 22 million tons of coal. There are 650,000

persons employed, over 620,000 of whom are Indians. The Indian Railway Board are busy upon the preparation of a worthy exhibit. Massive wrought iron and brass gateways, made entirely in the North-Western Railway workshops at Lahore, will be an especially prominent feature in the Railway Court. With lofty hills to climb and treacherous and immense rivers to span, the Indian railways have need of, and indeed have at their command, engineers second to none; and, by means of models and diagrams and in other ways, the Railway Board will be able to give some idea of the difficulties they have to encounter, and how those difficulties are surmounted.

The Survey Department have a space to themselves, and have already a programme prepared. Here will also be seen scale-models of some of the hilly country where the ever-present Frontier troubles arise and are settled, too often, alas! to rise again. "The Romance of the Indian Survey" was the title of a lecture read before the Royal Society of Arts recently; and the visitors who pass through this section of the Exhibition will be surprised at the amusement and instruction to be found in what they might be inclined to think a dull subject.

To many, even of those who claim some acquaintance with India, the existence of a Geological Survey Department is hardly known. The Geological Survey is a very live Department; and they have obtained an amount of space which at first sight would seem surprising. Mr. Banerji, who supervises this court, is reticent as to the surprises he has in store. A science which works out the history of the world from primeval times by nature's own records has great scope for its activities in a country so vast and of so varied contours as India; and it is fortunate that India's contributions to this science are to be so extensively displayed, and that the arrangement of the display should be in such capable and experienced hands as those of Mr. Banerji.

While the Empire Cotton Growers Association will be

making a most interesting and instructive display at the Exhibition, Indian cotton will have a little corner to itself, and not such a small corner either, in the Indian Pavilion. Very carefully selected specimens have been in process of collection for some time past; and the various processes adopted in the treatment of the cotton and in the improvement of the indigenous plant will be explained.

The art of Indian sylviculture, and the various uses to which forest by-products, such as resin, turpentine, dyes, oils, bark, tannin, can be put, will also be shown and explained, to some extent in provincial courts, but mainly in the Timber Court, as that court is designated, which will be devoted to a display of the forest major products. There are few uses to which Indian timber cannot be put: and under the fostering care and diligent research of the Forest Department an ever-increasing variety of timber is coming in to the market. Do you want to furnish your house or your flat, your board room or your shop? Here you will see how it can be done to suit the depth of every pocket. There will be a billiard room, a railway carriage, a Pullman car, and an infinite variety of small articles. The Timber Court, indeed, the only two-storied court in the Indian Pavilion, will form one of the main centres of attraction. There are many who will remember what interest was aroused by the display of Indian timber and its uses at the Empire Forestry Exhibition at Holland Park not so many years ago, but the display at Wembley will put that quite into the shade. An offshoot to this Timber Court will be found in the grounds of the section, where a motor launch and several smaller types of boats, made entirely of Indian wood by Messrs. Thornycrofts, will be shown in a neat and characteristic building of their own.

The Indian Tea Association are out to enhance, if that be possible, the reputation of Indian tea. Great and continual has been the advance in the market of Indian

tea; but it is a market capable of much further expansion.

Not only is this Association setting up its own court, but it is arranging to supervise the preparation of tea in the restaurant, which will be found in the grounds of the section. That restaurant will be in the capable hands of Messrs. Lyons, and has been designed to be in keeping with the characteristic design of the Indian Pavilion itself. It will possess an additional attraction, in that there will be a separate menu-card of Indian dishes. These dainties will be prepared by Indian cooks working, under the eye of a past master in the art of Indian catering, in specially designed kitchens.

India's contributions to the realms of fine art, both modern and retrospective, will be shown with the assistance of an expert committee. A committee in India has selected pictures and some bronzes, representative of the different schools of art which exist in India at this present time. Twenty-one cases have already arrived, but their treasures have not yet been revealed to the eye. Behind the Palace of Industry, in the Imperial Fine Art Gallery, a space of 1,500 square feet has been allotted to India alongside the Canadian and Australian galleries; and in that gallery modern Indian art will be shown. Meanwhile a very strong committee, giving its services gratuitously, is getting together a small collection of pictures and bronzes characteristic of the retrospective art of India. The field of selection is a wide one, the space for exhibition limited: the resultant display should therefore prove most attractive. For its exhibition the central hall has been chosen 60 feet long and 40 feet broad; this hall will be panelled in laurel wood to a height of 14 feet, and will lead, by a handsome colonnade, to the Timber Court, which has already been described.

There will be theatrical displays in two places. A South India pageant will perform in the Madras Court, while a theatre is being erected in the grounds of the section for

the performances of a party which is on its way, and which may comprise among its members some dancers from the hills to the north of India who have not been in England before.

The pavilion is all too small to make a really comprehensive display, even of the arts and crafts of India, the main object of the Exhibition ; and so it has not been found possible to allot as large a space as could have been desired for a "jungle exhibit," which has been prepared under the direction of Messrs. Rowland Ward, the well-known taxidermists. The exhibit has an added interest in that H.M. the King-Emperor, who has lent a superb pair of elephant tusks, H.E. the Viceroy, H.H. the Maharaja of Indore, have all contributed specimens. Messrs. Rowland Ward wisely decline to give any indication of their intentions, but it may be confidently expected that its success will be in inverse ratio to its size !

"The arts and crafts of India, the main object of the Exhibition," is a sentence which appears a few lines earlier ; and yet little or nothing has been said of them. No. The arts and crafts of India are, to some extent, already known ; and the many visitors who flock to the Indian pavilion will expect to find the silver and brass, the silks and muslins, the carpets, and the carved woodwork for which India is famed. In the confines of this brief article it has been attempted rather to refer in more detail to what visitors may not be expecting to find. It will suffice to say that in the courts of the different provinces and states the various arts and crafts will be displayed in more than usual magnificence and variety.

The produce and the manufactures in the court of each province and state will not be lumped together as in a museum, but there will be the individual stallholders, displaying their own goods under their own names. In many cases these stallholders will come over themselves to England to stand at their stalls ; in all cases the individuality of the producer will not be lost. Many who have not been

in touch with home conditions will be able to initiate the building-up of their own direct connection.

Graceful minarets, an imposing dome, and delicate tracery will be the most striking features of the pavilion in which India is to find a temporary home. To those familiar with India, the pavilion will, perhaps, more than all recall the outlines of the wonderful Taj Mahal at Agra and of the Jama Masjid at Delhi.

Burma, though a province under the administration of the Government of India, will not be found in this pavilion. So different are her people, her language, her characteristics, that she is building a pavilion of her own on ground hard by. Surmounted by pinnacles carved of teak wood in Burma, and transported overseas to England, and approached by gardens guarded by an ornamental canal and a quaintly carved gateway, her pavilion will be filled with a unique collection of her cottage industries, her silver and lacquer work, and her silks; while the capacities of her forests will be revealed in the well-matched and attractive teak panelling which will cover her walls.

Within the compass of this article it has not been possible to exhaust the whole range of subjects with which the promoters of the Exhibition will be dealing. They will show, it is hoped convincingly, that India is in every way qualified to stand by the side of—in many cases to lead—the other component parts of a self-contained Empire, whether in her peculiar arts and crafts, her produce, her manufactures, or her engineering and scientific attainments. The result is to be a quickening of her trade impulses, an expansion of the markets in which she will sell, and, in consequence, buy; and, above all else, the growth of a better understanding. She did not lag behind in the arts of war in 1914, nor will she be found lagging behind in the arts of peace in 1924.

THE NEW EAST

UNHAPPY BOKHARA—II

So far all had gone according to plan, and the Russians fully believed that their connection with these activities had been adequately concealed. Given sufficient time, they might have succeeded in producing a revolutionary Bokharan army capable by itself of taking the field with some chance of success against the Amir's ill-equipped forces. But events elsewhere would not wait on these preparations. The negotiations for a treaty between Russia and Afghanistan had been hanging fire for several months, and the Afghans were showing no signs of falling meekly into line with the Russian proposals. Obviously the overthrow of the Amir of Bokhara by his rebellious subjects would be calculated to frighten the Amir of Afghanistan into the speedy conclusion of a treaty with Russia, in order to lessen the possibility of the virus of Bolshevism spreading to Afghanistan as well. The end of August was fixed for the rebel coup in Bokhara, but, as it was realized that the Young Bokharans would not be able after so short a military training to achieve the desired end unassisted, Russian troops were secretly concentrated on the borders of the Khanate, and the rebel leaders were instructed to raise the cry of revolt on the appointed day and to make an appeal at once to the Russian administration at Tashkent for support for their just cause.

On August 31, 1920, the Young Bokharan forces crossed the borders of the Khanate with their battle-cry of "Down with the Amir," and according to the orders they had received from their backers they at once called upon the Bolsheviks to send them help. The support they asked for was standing ready mobilized for the purpose, and almost before the rebels

had started on their advance the regular troops passed through them on their way to Bokhara. The Amir realized at once that his fate was sealed and fled from his capital, only succeeding in making his escape with some difficulty, while some of his troops for a time stoutly resisted the attackers. But such resistance could not last for long. The Amir's army was only half trained and ill equipped to face Russian regulars supported by artillery, armoured cars and aeroplanes ; inevitably the capital of the Khanate soon fell into the hands of the Russians. The first step of the invaders was to set up a Soviet Government there under Russian guidance, a Government which was composed entirely of Young Bokharans and of those who had hurriedly decided to throw in their lot with the winning side. But although this administration was proclaimed as the Independent Soviet Government of Bokhara, it had but little of the old Khanate under its control ; for from end to end of Bokhara the population rallied to the cause of the Amir and opposed every step of the Russian advance southward from the Central Asian Railway. It was not only in Bokhara, moreover, that the effects of this Russian coup was felt. The whole Muslim population of Turkestan resented it bitterly, and in some parts of the province there occurred risings in sympathy with the Amir. These were soon suppressed, for they were but half-hearted efforts on the part of people lacking in these days any sign of real martial spirit. The bulk of the sympathizers outside Bokhara, however, sat on the fence and waited to see how events would turn out. Had the counter-revolutionary movement in Bokhara obtained a signal success at the start, it is probable that many of these waverers would have openly supported it ; but no such success was forthcoming, and in consequence the Bokharans were left to fight matters out by themselves. The Russians, too, were able undisturbed to bring down reinforcements from Central Russia to assure their position. In Afghanistan the downfall of the Amir of Bokhara, as was only to be expected, created a great stir, and diplomatic relations between Russia and Afghanistan came near to being broken off. But although

there was considerable indignation in Kabul against Russia, the Russians had been correct in their estimate of the effect which their coup in Bokhara would have on the Afghan Government, and within a week or two after its occurrence the draft of a treaty between Russia and Afghanistan was approved by both sides, although the Russian representatives showed themselves more ready to compromise at the last, for fear of arousing the active hostility of Afghanistan. Whereas the Russians had believed that their chief hope of obtaining the desired results from their attack on Bokhara lay in its being carried through without any suspicion of Russian complicity, in actual fact there was hardly a soul in the whole of Central Asia who did not fully realize that Russia had from the start been at the back of the Young Bokharans, yet at the same time Russia succeeded in gaining her immediate objectives. This realization, that the rebel activities under cover of which the invasion of Bokhara began were instigated by the Bolsheviks, gave a clue to the true value of the Russian claim to be the sole friend of the oppressed nations of the East, and was a blow to Russian prestige throughout the Orient which completely overshadowed the local advantages gained in Bokhara itself.

In spite of the vigorous resistance of the people of Bokhara, assisted by a handful of Turkomans and others from neighbouring districts and by a few Afghan volunteers, the Russians succeeded gradually in clearing the western half of Bokhara of their enemies, the Amir was forced to take refuge in Afghanistan, and the strength of the rebel movement appeared to be steadily decreasing. During 1921, it is true, sporadic fighting took place between Russian detachments and rebel bands, and the latter frequently attacked and interrupted the Russian communications, but the Russian position was becoming stronger and stronger. The following winter saw the inevitable lull in the operations, but the advent of the spring of the ensuing year brought a renewal of the anti-Bolshevik activities, and this time on a decidedly more vigorous scale. For in March, 1922, Enver Pasha, who after being removed

by the Russians from the Caucasus had been allowed to pay a visit to Turkestan, suddenly deserted from the Bolshevik side to the rebels and undertook their leadership. What caused Enver to throw over his former friends and to cast in his lot with their enemies is hard to judge, nor is it a question which needs to be discussed in detail here. The probability is that, a slave to ambition, he saw a chance of carving out for himself a kingdom among the Muslims of Central Asia, relying perhaps on Afghanistan to help him to achieve his desire. His presence with the rebels gave an immediate fillip to the movement. His prestige in all Muslim countries but his own stood high, and his very name was an inspiration to the Bokharans. The various rebel leaders, who during the previous year had been prevented by petty jealousies from combining together, were brought into harmony by Enver, who co-ordinated their efforts and made the most of the forces available. The Russians found themselves harassed in every direction at once. Whenever their posts were weak enough to give their enemies a chance of success they were assaulted and frequently destroyed; small detachments on the move were certain of attack by Enver's elusive bands; and Russian communications were interrupted wherever a suitable opportunity offered. For several months the position of the Bolshevik garrisons in Bokhara was extremely precarious, but on the one hand the Russians were able to obtain additional troops from the north, while the rebels had no means of increasing their supplies of arms and ammunition, Enver having failed to obtain any real assistance from the Afghans. The campaign for the freedom of Bokhara which he had begun so successfully suffered a series of setbacks as a result of the superior numerical strength and better armament of the Russians, and, finally, early in August he himself was either killed in action or murdered in Southern Bokhara, whither he had been forced back with the remnant of his following. His death was a grave blow to those who hoped to drive the Russians out of Bokhara, but most of the remaining rebel chieftains transferred their loyalty without hesitation to

Enver's Turkish chief of staff, who stepped into his shoes on his death. Under his command raids on Russian posts and communications continued with varying intensity, the rebel activities dying down to nothing during the winter, but sometimes assuming proportions similar to those of Enver's time when the season and opportunities were favourable. Despite all his efforts, the new commander, lacking the prestige of Enver, has on the whole failed to control the various rival elements who make up his forces, and in consequence the Russians have continued to increase their hold on Bokhara, while the strength of their enemies has dwindled. The old jealousies between the rebel lieutenants have reappeared, and there is now little or no connection between the operations of the various bands; ammunition supplies have steadily decreased, and the feeling that no outside assistance can now be hoped for has had a depressing effect on the morale of the individual. It might be imagined therefore that, given the requisite troops and an energetic commander, the Russians would have no difficulty in clearing up the situation in Eastern Bokhara once and for all, and by breaking down the rebel resistance in restoring settled conditions to this area. But the nature of the country is on the side of the rebels, who have their bases in the lofty mountains, whence they can make rapid raids into the plains and valleys and return to their inaccessible eyries before a pursuit can be organized. To deal with such guerilla tactics is ever a long and tedious business.

While the Russian army in Bokhara has been doing its utmost to stamp out the rebel opposition, the Russian civil officials have kept the control of the administration of that part of the country which is free from rebel influence in their own hands, ignoring the puppet Soviet Government composed of local men, and allowing them little or no say in the affairs of their native land. As for the agricultural and economic life of Bokhara, from which at the time of their attack on the Amir the Russians had hoped to obtain so much, the ceaseless fighting and unrest, wholesale requisitioning and

wanton destruction have effectually crippled it. Many of the inhabitants have fled from their homes and left their fields uncultivated ; irrigation channels have fallen into disrepair ; factories lie idle ; and for the most part Bokhara to-day is as much of a wilderness as the rest of Turkestan. Such is the state of affairs to which the unprovoked attack by the Russians in August, 1920, has led. Even those who looked upon the Amir as a tyrant and welcomed his downfall as a blessing have been disillusioned, and the independence granted by Russia to the new democratic Bokhara is still only a name. The whole country is overrun by columns of Russian troops ; the Russian, not the Bokharan, official has the last word in all questions of administration ; and Bokhara, as far as it has been conquered up to date, is as much a part of Russia as the rest of Turkestan. The Russian control as at present exercised is presented as a measure of necessity due to the activities of the local rebels. It remains to be seen whether, when the rebels are ultimately crushed, the Russians will be willing to redeem their promises and gracefully to leave this unhappy country to its own devices, as the bulk of its inhabitants undoubtedly desire, in order that it may enjoy the independence so much spoken of, but so little enjoyed during the past three years. Even if they are content to quit Bokhara, the country will take many years to recover the comparative prosperity which has been so effectively destroyed by the unwarranted Russian intervention in its affairs.

A. RAWSON.

THE KHILAFAT

BY SIR ABBAS ALI BAIG, K.C.I.E., C.S.I., LL.D.

THE iconoclasm of Angora in bringing to a pathetic end the glories of the House of Osman by dethroning the Sultan Wahid-ud-Din in November, 1922, and, in less than sixteen months after his flight, in deposing the Khalif Abdul Mejid, has produced widespread repercussions in the world of Islam and a disconcerting effect on the Khilafat movement in India. The embarrassment of devout Muslims all over the world has been enhanced by the collateral action of the Grand National Assembly in suppressing the Commissariats of Religious Affairs and Pious Foundations. The confiscatory proceedings in regard to the palaces and jewels of the Ottoman princes and princesses are calculated to arouse misgivings that the secularists of Angora are not immune from the communistic influences radiating from Moscow. These misgivings will be deepened by the disclosure that the moving spirit and chairman of the committee which drafted the Bill deposing the Khalif, abolishing the Khilafat, and confiscating the belongings of the innocent descendants of the founder of Turkish greatness, whose name, Osmanli, still differentiates the Turkish Nationalists from other cognate races, was the extremist Younous Nadi.

The argument advanced by the leaders of the People's Party, which holds an overwhelming majority of seats in the Grand National Assembly, that the theocratic conception of the Khilafat is merged in the democratic idea of the new Republic, is too sophistical to find acceptance. It is being rejected everywhere outside the narrow limits of Nationalist Turkey.

It will, however, be recognized by progressive Muslims

all over the world that the views of the Ghazi President of the Republic and his supporters that an unreasoning adherence to the traditions of an unrevivable past, in disregard of the evolution of new forms of government, are well founded. His condemnation of the Turkish judicial system, which needs emancipation from the hampering chains imposed upon it by unprogressive canonists, should be welcome both to the Muslim and non-Muslim subjects of the Republic. The measures for raising the status of women, for unifying and modernizing the educational organizations, and for placing religious instruction on a sound foundation in the light of positive knowledge are calculated to accelerate national progress, and to have a far-reaching effect in other Muslim countries. But however much the Muslim world may welcome these and some other reforms foreshadowed in the speech of Ghazi Mustapha Kemal in opening the epoch-making fifth session of the National Assembly, it will find it difficult to reconcile the measure for "freeing religion from political ties" with the historical combination of religious and political power in a single organ which functioned so successfully in building up a great civilization in the halcyon days of the Omiyads of Damascus and Cordova, the Abbasids of Baghdad, and the Fatimites of Egypt—a civilization which, according to the testimony of European historians, was unsurpassed in its brilliance and grandeur, and was much superior to what contemporary Europe could show. This magnificent edifice of culture and elegance sank under the pressure of events which had no connection with the exercise of temporal power by the religious head of Muslims, in conformity with the example of the Prophet himself and his immediate successors.

The Muslim world is alive to the fact that the traditional combination of an irresponsible super-Sovereign and a super-Imam in the person of the Commander of the faithful must adjust itself to the changed and changing conditions of the Islamic world, especially of Turkey, and that the

Khilafat, in view of the increasing strength of democracy, must be subject to such limitations as would make it compatible with the conception of the sovereignty of the people—a conception which is in accord with the principles of Islam. It was hoped that the genius of Ghazi Mustapha Kemal Pasha would seek a solution of this complex problem in conformity with Islamic doctrines and traditions. The drastic solution which Angora has found in the abolition of the Khilafat has come with a bewildering effect upon the world of Islam. It was not expected that New Turkey would deprive itself of an august institution associated with its pre-eminence among Muslim countries and sink to the level of a Balkan state.

The motive underlying this amazing action is traceable first to the dread of an internal royalist upheaval which might shake the foundations of the nascent Republic; and, secondly, to a desire to relieve the strain on the exiguous resources of Angora, which is faced with recurring heavy deficits in its budget, by the confiscation of the possessions of the Khilafat family.

This unjust action, which savours of the methods of Moscow, has outraged Muslim sentiment all over the world. It has evoked condemnation by the strongest supporters of Angora among the Muslims of India. Ismet Pasha's statement that the sympathy and support of the Muslim world were ascribable to the strength of the Turkish Nationalists, and not to the Ottoman Khilafat of Constantinople, has met with an emphatic repudiation everywhere, though the achievements of Angora are not under-estimated. The Khilafat is declared to be unabolishable by an assembly of secularists representing only a small fraction of the 250 million Muslims in the world. India, with her 70 million Muslims, rightly claims a correspondingly preponderant voice in the settlement of this momentous question. As the Muslims of India have no axe of their own to grind in this matter, and are free from racial or political bias, their views must carry great weight.

The *Ulema* of Egypt, true to the traditions of *El Azher*, have issued an admirable and opportune manifesto, denouncing the invalid action of Angora, and urging that the Muslims of all countries should, without delay, organize a representative Congress for settling the question. In the unparalleled circumstances of the situation, this weighty manifesto suggests the most acceptable method of dealing with it. In the midst of the rival ambitions and the racial and political considerations which have been stirred in different parts of Asia and Africa by an unforeseen and perplexing event, it will not be an easy matter to give effect to the sound proposal of the Egyptian Ulema, especially as there are no responsible organizations for convening a gathering representative of the Islamic world.

If the Muslims of India accept the Egyptian proposal and bend their energies to the work of carrying it through, a more satisfactory solution of the Khilafat question might be reached than by sending a delegation to Angora, which has adopted an uncompromising attitude in advance, and has expressed its determination to reject the counsel even of its best friends and well-wishers. Angora will probably not stultify its decision by sending any representatives to a general conference of Muslims. The attitude of the pro-Khilafat Turks will depend on the power of Angora to bend them to its will and purpose.

Should the election or confirmation of a generally acceptable Khalif not materialize, the Khilafat may possibly divide itself into a number of territorial khalifs or super-Imams like those of Morocco and Sana, or the recently proclaimed Khalif of the Hejaz. In any case, the apprehension that the Angora coup may be fraught with disastrous consequences to Islam is unjustified. Islamic history records the extinction of four dynasties of Khalifs. Abdul Mejid is the twenty-fourth Khalif to be deposed. Despite the vicissitudes of the Khilafat and the political misfortunes of Muslim nations which have led to the disintegration and decline of their ancient empires, Islam, as a world-religion, has not only

maintained its vitality against the onslaughts of other creeds, but is still a spreading faith, and its followers are on the increase in places where the influence of the Khilafat is not felt. But this fact does not do away with the necessity of the institution, both as a religious factor and as a supreme unifying force in the world of Islam, constituting a rallying centre and a nucleus of Muslim culture.

A satisfactory settlement of the question which now faces the world of Islam bristles with almost insuperable difficulties. If Mustapha Kemal Pasha assumes the Khilafat as President of the new Republic, and bases his claim on the suffrage of the Islamic world, Muslim India may acquiesce, though recent happenings have brought about a revulsion of feeling against him. The pathos which marked the dethronement of Abdul Mejid—a man of high character, talents, and refined tastes, who filled his exalted office with dignity and in conformity with the tenets of Islam—has aroused universal sympathy. His words invoking the blessing of God on those who deposed him “for the good of his country” have touched every Muslim heart. But the great achievements of the Ghazi are still fresh in the memory of his co-religionists, and his election would cause the least dislocation in present conditions.

King Hussein of the Hejaz has been an aspirant to the honour ever since his revolt, and he had been waiting for a suitable opportunity. The melodrama of his acceptance of the Khilafat offered to him by his two sons and his and their adherents will leave the main currents of Muslim thought unruffled. The holy cities of Mecca and Medina are an important asset in his possession. His Hashimite descent may have some value in the estimation of Arabs. But no sanctity attaches to the Koreish, who were the bitterest persecutors of the Prophet. Race inequalities are repugnant to the spirit of Islam, which inculcates that all Muslims are “equal like the teeth of a comb,” and that personal merit alone is a factor that counts.

King Fuad of Egypt is the head of the leading Arab

nation in the world. His election may be more acceptable to the Muslim world than that of King Hussein. He is a more cultured and enlightened potentate, still in the prime of manhood.

Aman-Ullah Khan, Amir of Afghanistan, is a monarch whose status and antecedents are, from the general Muslim point of view, better than those of other aspirants. He is progressive and enlightened, and is imbued with a desire to strengthen Islam and to advance its renaissance. Above all, he is independent of any non-Muslim control or influence—a condition which the world of Islam considers absolutely essential. But his capital is remote from the centres of Muslim culture and from the holy places of Islam.

In India the names of the Nizam of Hyderabad, the foremost Indian Prince, the Begum of Bhopal, and other Muslim potentates, may replace the name of the Khalif in the congregational prayers on Fridays, if the election or confirmation of a generally accepted Khalif presents insurmountable difficulties.

Whatever the fate of the Khilafat may be, there can be no set-back to Islam as a great world-religion.

POLITICAL NOTES FROM INDIA

*(Specially Contributed)*DELHI, *March 1st.*

By the time these words appear in print the first session of the new Legislatures will have drawn to a close. Contrary to the very general opinion of the pessimists, it seems unlikely that the Swarajists will have succeeded in effecting any epoch-making cataclysm. Their position in the central Legislature has not been so strong as is the case with certain provincial councils. In the Central Provinces, and to a less extent in Bengal, they have possessed a steady majority, with the aid of which they have succeeded in throwing out a large number of Government measures. Indeed, in the Central Provinces the position has come very near a deadlock. Government cannot pass a single measure in the face of a united and hostile majority. As might have been expected, some of the officials have displayed signs of impatience. But while it is undeniable that the conduct of the Swarajists has been sufficiently irritating, it is none the less clear that their powers of obstructing the normal course of administration are extremely limited. If the Government of the Central Provinces were sufficiently callous to sacrifice the interests of those committed to their charge for the sake of a triumph in the political sphere, they could put the Swarajists in a very awkward position. All they need do is to accept the decision of the Legislative Council in regard to financial matters, and decline to restore the items which the Swaraj majority will assuredly excise from the budget. The result would be to bring to an abrupt and sudden termination all the transferred departments, including education, sanitation, and public health. All those Indians who hold positions in these departments would be automatically deprived of their livelihood. And since it is from the middle-class intelligentsia that the Swarajists derive their strength, there can be little doubt that such a

course of action would assuredly lead to a great and speedy revulsion of feeling against the Swarajist policy of obstruction among the actual constituents of the sitting members. But the cost in individual and in public suffering would be so excessive, that it may be questioned whether any Government could screw itself up to take such a step. What Sir Frank Sly and his colleagues in the Central Provinces will probably do is to take charge of the transferred departments, and to keep them running until the present adversity be overpast.

If in the Central Provinces the Swarajists seem to have succeeded in their policy of obstruction, this is virtually the only triumph they can claim. In Bengal, while they have defeated Government on several important occasions, they have not been able to rally the independent element into a reliable and obedient section of their own party. In the central Legislature they have done better than was expected of them. Pundit Motilal Nehru, who is the most considerable organizer in the Swarajist camp, succeeded at an early date in the session in bringing his own followers and a powerful section of the Independents into a new group, which goes by the name of the Nationalist Party. This party, which began with a nucleus of some forty-eight Swarajists, has been swelled by the addition of Independents until it numbers seventy-four—a clear majority in the Lower House. This triumph of organization was accomplished at some cost to the consistency of the Swarajists; for the Independent members would only join the party under certain conditions. They were prepared to unite with the Swarajists in obstruction, provided, first, that the response of Government to the demand for constitutional advance was unsatisfactory; and, secondly, that obstructionist tactics were endorsed, on each occasion when it was proposed to put them into practice, by three-quarters of the party strength. Incidentally it may be mentioned that there has been a disagreement between the Independent and the Swarajist members of

the Nationalist Party as to the precise interpretation of this latter provision. The Independents took it to mean that three-fourths of the whole seventy-four members of the Nationalist Party must decide in favour of obstruction before obstruction could begin. The Swarajist members, on the other hand, maintained that the stipulation is sufficiently honoured if three-quarters of the members present at any given meeting record their endorsement of the proposal.

Plainly the possession of an instrument such as the new Nationalist Party gives the Swarajists a preponderating influence in the Central Legislature. That they have not made greater use of it is due to a combination of circumstances. In the first place, the wiser heads, among whom must emphatically be included Pundit Motilal Nehru, are extremely anxious to avoid any action which might unduly embarrass the new Government in Great Britain. It is true that they will not openly acknowledge their deference to English opinion. None the less, this factor remains a most powerful influence in the direction of moderation. The leaders of the party are in close touch with Labour opinion in England; and their present policy is very largely directed by the advices they receive from home. How long this moderating influence will continue depends very largely upon the rapidity with which the Labour Government can direct its attention to Indian problems, and the kind of response which it makes to the universal Indian demand for constitutional progress. The speech delivered in the House of Lords by the new Secretary of State in the last week of February was received far more favourably in Indian political circles than would be gathered from the Press comments. Even advanced politicians here seem to realize that a new day has dawned with the accession of the Labour Party to office; and although they do not imagine that any Government in Great Britain will so far depart from the traditions of its predecessors as to make India an immediate grant of Home Rule, they do, none the less, feel that there is every likelihood of an extremely

sympathetic attitude towards Indian aspirations. It is the desire to avoid all action which is likely to embarrass the friends of India in England which is at the present moment steadily becoming the dominant motive of the Swaraj Party.

The contrast between the behaviour of the Swaraj Party in the Central Legislature and its declarations at the time of polling is now a somewhat delicate subject, upon which there is no use to enlarge. The Swarajists themselves are naturally sensitive upon the subject, and, if challenged, will assert that there has been no inconsistency. They have, of course, to keep in mind the party ticket upon which they were elected, as well as the wider considerations with which their participation in the Legislatures has brought them into touch. This doubtless accounts for their anxiety to make fiery speeches, while avoiding any action which might do positive harm to their cause in the eyes of Labour in England. In this connection the new budget has provided them with a very pretty problem. Despite its intrinsic excellences, their first impulse was to throw it out bodily as a protest against what they regarded as the unsatisfactory response of Government to their demand for the constitution of a round-table conference to consider the question of immediate advance to Home Rule. But wiser counsels shortly prevailed, and while it is too early at the moment of writing to prophesy precisely what the fate of the budget will be at the hands of the Swarajists, there seems every likelihood that they will allow it to pass; salving their conscience on the one hand by throwing out one, or at the most two, particular items by way of showing what they could do if they tried, and on the other hand by abstaining alike from support and from opposition so far as the remaining items are concerned. How they will be able to explain this procedure to their constituents, to whom they are pledged to wreck the present Constitution, remains to be seen; but they will probably be able successfully to plead the exigencies of the political situation as an excuse

for not immediately embarking upon obstructionist tactics, coupled with the reflection that if Labour disappoints their hopes, they can at any time put into operation those vigorous measures which constituted their principal claim to the suffrages of the electorate.

Second among the embarrassments from which the Swarajist Party suffers at present may be counted the release of Mr. Gandhi. As to the popularity among all sections of the Indian community of this act on the part of Government, there can be no dispute. But the Swarajists feel that they have departed radically from the "triple boycott," which was the keystone of Mr. Gandhi's faith; and as their hold upon the country depends entirely upon their claim to represent his views, the opportunity which his release affords him of expressing his sentiments without the aid of interpreters is likely to be somewhat awkward. His present state of health has not so far allowed him to launch his fiat upon the question of entry into the Legislature. This fact has given the Swarajists a certain reprieve. But they realize that he is still an upholder of the "triple boycott"; and they fear that his fiat, when it does come, may insist upon the withdrawal from the Council of all those who claim to rank as his followers. In addition to the general feeling of insecurity which this creates, there is also the consideration that what the Swarajists are to do they must do quickly. If they could show some positive achievement, whether as a result of a gesture on the part of the Labour Government or otherwise, they might be able to persuade Mr. Gandhi to hold his hand, and at the same time to present to the electorate a creditable record within a short space of time.

The immediate future of Indian politics depends upon the possibility that the Swaraj Party, which has been in the wilderness for three years, can be persuaded of the desirability of remaining within the four walls of the Constitution.

EDUCATION IN CHINA

BY DR. S. LAVINGTON HART

IN China it is impossible to exaggerate the influence of education, or rather the influence of educators and of students in the affairs generally deemed to belong strictly to the statesman. Of course, this was true for the old régime during which great scholars held unbounded power in the land ; but to-day, when all that has been changed, the power of the student world in the affairs of State has been one of the unexpected manifestations of the new order. Who could have foreseen the position of dictatorship that was assumed by the combined student forces of China, a dictatorship before which even high officials had to bow ?

The student strike of four years ago and all its strange revelations of co-operation and executive ability may not be repeated ; but one fact will prove permanent, and that is the powerful influence of Chinese students over public opinion. Whether this is a salutary feature of public life or not is not the point. There *is* this huge power of the student body, and it must be taken into account. The question to consider is this : If students are moulding the public opinion of the country, who is moulding the thoughts and opinions of the students ? And, above all, who is moulding the men themselves ? For, after all, it is the man who counts in these things even more than his opinions.

If we had not known this before, we learnt the salutary lesson at the time of the strike of the students in 1919.

When the day came that had been settled as the date for ceasing study, the leaders in our college came to me, and in a gentlemanly way explained the situation. They asked that all the students be marshalled in the hall of the college, and further requested me to speak to the assembled

body. I was glad to do so, though taking no part in the movement of protest against the action of the Government.

I wondered what the outcome of it all would be. The seniors among them had read their Greek history and knew their French Revolution; there were models enough for them to choose from in all these studies for their rising against the authorities. But had they learnt anything else to guide them? This was my anxiety. For now they were to be left to themselves, and we had to retire.

My fears were set at rest, for the leaders, both of them non-Christian, made a further request on behalf of the students, and that was to the effect that each day they might meet in the hall before they went out to their public duties. When asked the purport of such a gathering, they said they wanted to meet daily to pray to God for their country. And so they did, for weeks, though the large majority of them were non-Christian. And during the anxious days that followed it was a relief to find that in Tientsin not a small part of the leadership in that movement was under the sway of the same wholesome and strong influences.

Seeking to mould character had not been in vain.

If it is not presumption to mention personal experiences, I should like to mention two other examples of the result of education (as distinct from instruction) on matters that affect the welfare of the State. What I say about one college is doubtless true of many others.

A few years ago a young student left us before his course was completed, as a rich relative, the owner of a large cotton mill in the neighbourhood, wanted him to begin work at once in his mill. We were sorry to lose him, as he had given promise of repaying any care bestowed on him. He came to see me not long ago to tell me of his experiences. In the five years he had worked his way through, so that he was now manager; this being no small thing, as the mill in question is one of the largest in China. He told me of what he had tried to do for the hundreds of

workmen employed under him. I need not say that the state of factory life in some parts of China leaves much room for reform.

He told me of the rooms he had built for them, of the special accommodation for the women, of the recreation room he was running for the young boys, of the night-school he not only had started for them but was teaching in himself, though manager of the whole mill, and of a special lecture that he had started for the workmen on Friday evenings, at which he wanted to reproduce some of the things he had learnt in the college chapel, although he was not a professed Christian.

We had not included the new term "Civics" in our curriculum, but he was busy in his new sphere building up a model factory and founding his endeavours on what he had learnt while with us. We talked the matter out of the two twelve-hour shifts, night and day, which even in his place are the regular thing, and he is now trying to introduce the three shifts of eight hours each instead; if he can succeed against the inclination of the owners, something will have been done for the improvement of industrial life over there.

A few days after the visit of this old student, another came to see me. He was at work in the salt gabelle in another province. While in Tientsin he had never been a brilliant student, but had a bright spirit with plenty of love for sports, and he had proved himself a good footballer.

Away in Shansi he had made himself busy; with some others he had started night-schools for teaching English to the young fellows in the city, and other meetings as well; he had got into touch with the three Government middle schools, and was giving them real live football; in short, he had, altogether on his own initiative, constituted himself an apostle of his Alma Mater, and was carrying out there in a distant place what he had received while with us.

I mention these few instances of what I have myself seen, as I know that similar instances could be reported

from other colleges, and because to me facts of this kind are so many proofs of the vigorous influences that are being exercised by students in China, influences felt not only in the doubtful field of politics, or even the formation of public opinion, but in the rapidly developing industrial life of the country, and in the realm of social affairs.

In every land this is true to a certain extent, but in China to-day, where the new order has not yet been set up, and things are beginning to crystallize into a final form, it is hard to exaggerate the importance of the young fresh life of the student, or the result of his impact on the still plastic industrial and social conditions of his country.

In expressing my thoughts under this second head of "The Power of Education" in the land, it is already clear that I am not thinking in the first instance of education in the abstract, or of any definite programme of instruction, but of education as represented by the student himself, and therefore also behind the student by the teacher if he can but climb out of his rôle of instructor and become an educator, a friend, and a leader of his students. There are many influences at work in China at this time: there is the new force of the Renaissance Movement; there is the rising pressure of commercial competition; there are the excitements of international questions, and the quickening impulses of patriotism and race feeling. Is there any influence more quieting and strengthening, more likely to heal the ills of the land and bind two countries together in amity, than that of the happy, lasting relations between master and student, who are bound together by mutual respect and affection, when they work together for the highest ends? I commend this thought to all, but especially to politicians, those who are looking for solutions for the problems of the day.

Our survey, such as it is, is almost at an end; I need not add that it is partial and incomplete. Especially does it fail if what is looked for is a categorical statement of the chief institutions of learning in China, or a technical descrip-

tion of the curricula followed in the various departments of instruction. May I remind you of the Report of the Educational Commission, in which much of this information may be found.

For instance, to some it proves of interest to know that in the Government schools of China of the elementary type there are some four million scholars, the proportion of girls to boys being $4\frac{1}{2}$ per cent. The numbers for the Christian schools are 185,000 in the primary department, the proportion of girls being 45 per cent. Another interesting comparison may be found by putting together the numbers in middle schools, when it transpires that 1.6 per cent. of the whole number of scholars or students in the Government schools are in the middle grade, while the proportion for the Christian schools is 7.6 per cent. Yet again we find from these tables of statistics that of the whole population of China 1.3 per cent. are in the Government schools, while 10 per cent. of the total Christian population are at school.

I do not feel like pressing these comparisons; indeed, in what I have sought to bring before you, I have not drawn distinctions between Christian institutions and those of the Government, judging that it would be well if the same great principles should apply to the one kind of school as to the other.

The above remarks are those of one engaged in a survey of the field, and not, be it understood, as one holding a brief for Christian schools.

At the same time, to be honest, it is necessary to add that all our experience teaches us that the greatest gains for the student himself and for his country are seen only when the culture of the mind and the training of the character are carried on *pari passu*; and that, although ethics may form part of a curriculum, no strong or lasting result can follow except under the influence of the living ethical principle which is the essence of the highest religious training.

I repeat that I am anxious not to draw comparisons, and especially would it be invidious to make rapid conclusions as to the two classes of schools at such a time as this; for the last year or two have been exceedingly difficult for those in Government institutions. Salaries have not been paid; students, teachers, and college officials have gone on strike to enforce payment of arrears of salaries, and even the staff in the Ministry of Education have had to follow suit.

All these evils are temporary, it is to be hoped; and before long the interesting programme for the education of all parts of China may begin to be carried out in earnest. That this programme is a living one may be seen from the principles laid down at the last meeting of the National Educational Association held in Canton in October, 1921.

From this may be quoted the following:

1. The new system is to be in accordance with the republican form of government, and to develop the spirit of democratic education.
2. It is to be in harmony with the requirements of social education.
3. It is to develop the individuality of youths and allow them freedom of choice.
4. It is to allow for variation in different localities.

Perchance something might be learnt in this country from the suggestiveness of such a programme.

But it has not been my purpose to deal with technical matters or the details of educational work in China, and as I close I would return to the main theme. May I express it in a phrase or two, and say that education in China is a big thing already, and that it is growing fast; also that it is fraught with consequences of the greatest significance not only for China, but for its relations with other countries as well; and that therefore it behoves us not only as lovers of China, but also in the interests of our own country, to treat this matter seriously, and to see to it that if there is any help available, we should render it both speedily and wisely.

There is in all our minds the consciousness that precisely at this time of China's awakening and of her consolidation, there is help that is within our power as a nation to give to her, and it would be foolish for us to ignore this epoch-making possibility, merely because it is hard to avoid controversy while discussing it.

At the very least we can all agree on certain broad lines of procedure. Thus, since the proposal for help is made from one nation to the other, for the mutual benefit of both, it is evident that China must be consulted before the final form of the assistance to be rendered is settled. Also, that it is impossible that any narrow views can be held when religious questions have to be discussed.

In common with many others, doubtless, I have thought this matter out and come to conclusions as to what would constitute the most efficient contribution which this country might make, but I do not propose to bring forward these special suggestions of my own.

It is better to refer to the position taken up by the Associated British Chambers of Commerce in China, inasmuch as this body is an exceedingly influential one, destined, we feel sure, to play no small part in the administration of this fund.

A report of their conference, held in Shanghai in February of this year, has already appeared in the Press, so that there is no need to reproduce their decisions at any length.

Briefly, then, they advocate that the funds should be devoted in the first place to the support of secondary schools in China under British control, so long as they are efficient; together with provision to strengthen feeder primary schools through scholarships to the secondary school; scholarships also to be given to students proceeding from those secondary schools to Hong Kong University, and in certain cases to universities in Great Britain.

They advise that assistance be given to Hong Kong University, to certain Union institutions, and to girls' schools.

They also state that there must be ample provision for the representation of Chinese opinion.

I believe I am right in declaring that the feeling in China, among British residents, is in favour of these proposals; there is also a conviction that better results will follow from the strengthening of two or three institutions so as to make them thoroughly efficient, than by scattering help over a larger number of schools; and, further, that more will be gained by building on foundations already laid than by starting *de novo* on untried ground. In China gain of confidence counts for a great deal.

In a word or two, the aim is to set up in China a few examples of the highest type of British educational institutions. This does not mean any estrangement from Chinese wishes and ideas; indeed, the contrary would be true if care were taken to select those colleges that have already proved themselves acceptable to the Chinese.

Another form of contribution to the forces of education in China might consist in sending to definitely Chinese institutions teachers and professors from some of our home universities. An excellent way of helping China, but not likely to produce such permanent or far-reaching results as the former plan.

It is a matter of general agreement that only well-qualified students should be sent to this country, the large majority of those educated under the auspices of this special movement remaining to study in their own country. I would take this opportunity of appealing for special interest to be taken in the Chinese students who come to this country to study; a great deal has already been done in certain quarters, but much more must be attempted if the number of these students is considerably increased, as we hope it will be.

Sometimes a mistaken and very misleading view of this question has been advanced. It has been stated that Great Britain is out to gain as much as possible for herself by this return of the indemnity money: so long as there are

definite prospects of immediate cash returns at least equal in amount to the money returned, the thing is worth doing; if not, leave it alone.

To my mind, this is an entirely wrong position to take up, and an unnecessary one. Unless I have been altogether deceived in the conclusion to which the survey of the educational problem in China forces me, there is, linked up with the right kind of educational work, the possibility of reaching results of such magnitude, results which, though indirect, affect the whole relations between the two countries, that there is no need to be considering such financial returns.

The interests at stake are immeasurably great; if once the two nations are linked together by mutual understanding and friendliness, who is going to measure by so many pounds a year the benefits that will accrue to both countries, and I may add, to the rest of the world?

CHINESE TURKESTAN

BY LIEUT.-COLONEL P. T. ETHERTON

H.M. Consul-General in Chinese Turkestan; Author of "Across the Roof of the World"

CHINESE Turkestan, or the New Dominion as it is known to the Chinese, forms an important part of the Celestial Empire, and in the following article I propose to deal with it from its various aspects, and to bring out its possibilities from a commercial and industrial standpoint.

It will be of interest to give briefly the geographical composition of Chinese Turkestan. It is bounded on the north by the Altai Mountains, on the east by the province of Kansu in China Proper and the desert of Gobi in Mongolia, on the south by Tibet and the northern frontiers of India, whilst on the west we have Russian Turkestan and the Pamirs, more familiarly known as the "Roof of the World."

Speaking generally, the province is a land of oases, the arable parts being limited to the rivers and streams, and a narrow belt running along the foot-hills of the borderland separating Tibet and India from Chinese Turkestan. This belt is of no great width, but it marks the cultivable area, and is rendered fertile by the presence of rivers and streams which are brought to bear on the land by a system of irrigation worthy of explanation in detail. The rivers are first of all taken at the point where they issue from the mountains and divided into main streams, these in turn being split into canals and minor channels at the different villages and hamlets, whence the water is diverted on to the land. It will thus be seen that irrigation is the mainstay in the economic welfare of the country; the water question forms one of the leading features in the life of the people, and nothing gives rise to more frequent dispute and quarrel

than the allocation of the water supply to the different parts of any given area.

The climate is the same as that of regions remote from the sea: in summer considerable heat, in winter corresponding cold. Humidity is almost nil, but a marked feature is the high wind prevailing in the spring with clouds of dust, enveloping the country in a haze that frequently takes several days to clear away.

The total amount at present under cultivation is about seven thousand square miles, a figure that could be very considerably increased if the Chinese were to adopt a scientific system of supply, such as we have in India and Egypt, so as to make all possible use of the water available. The amount of land suitable to cultivation is large, and could be expanded, with a resultant enhancement of trade and revenue. The distribution of the rural population is governed by the oases formed by the irrigation arrangements, and between and beyond them one finds large stretches of waterless country. This is particularly noticeable in the south in the vicinity of Khotan, famed for its buried cities and the ruins brought to light by the celebrated archæologist, Sir Aurel Stein, where one passes for several days through barren and arid country not yet made available to the cultivator.

The general features of the province present several interesting aspects, notably in the northern and central parts where the sandy tracts are less frequent, and the general physical formation of the land is a succession of low, narrow ranges of hills, the ground in the immediate vicinity being composed of sand and shingle which would not lend itself to cultivation however good the water supply might be. In the north, too, we find lakes, such as the Sairam Nor and the Ebi Nor, into which many of the streams flow, or not infrequently they lose themselves in the desert, as is the case in Seistan. In the southern part of the province we have large areas of ground covered with a saline deposit, but this brackish, salty soil is not confined to Kashgaria; it

is met with all over the New Dominion, salt impregnating the ground generally, and often cultivated fields present a snowy appearance from the amount of salt exuding from the soil.

From the above we see that the general geographical formation of Chinese Turkestan is a valley with an environment on the north, west, and south of high mountains. The depression itself is flat, with the exception of a range of hills known as Mazar Tagh, just north of Khotan, and an offshoot of the Thian Shan, near Karashahr, on the old Imperial road from Peking to Kashgar, known as the Kuruk Tagh. Although flat, Kashgaria itself is not low, but comprises a plateau varying from 2,700 feet above sea-level at Lake Lop to 4,277 feet at Kashgar. I have already indicated that the surrounding mountains pour many streams into this depression, the main river being the Tarim, on which Sven Hedin carried out a good deal of his exploration work. Beyond the Tarim lies the Takla Makan Desert, forming a great obstacle to any attempt to open the country from the east.

The bulk of the people are Turkis, a mixture of the original Iranian inhabitants of Central Asia the Tajiks, with their Turanian conquerors, the Usbegs. The Turkis are engaged in agriculture and commerce, and are Muhammadans of the Sunni order, many of them belonging to the Sufi sect. They are friendly to the foreigner, but show no marked desire for advancement or the development of their country.

The natural wealth of Chinese Turkestan is as yet unexploited, and herein lies a rich field for mining and commercial enterprise. Gold is found in the southern part of the province and in the mountains fringing the northern borders of Tibet. Copper is also much in evidence, coal is found at many points, whilst there are extensive deposits of ozokerit, or mineral wax, near Yarkand, and in the foothills of the Thian Shan, just north of Kuchar. Oil is also found near Kashgar, but the working monopoly is in the

hands of the Tungan commander-in-chief, who exploits the wells on primitive lines, and commenced his development operations a few years ago under the auspices of a Swedish engineer who was a refugee from Russian territory. These oil-fields cover fairly extensive areas within fourteen days of the Russian railway, the oil and petrol being of proved quality.

The Chinese have not tapped the mineral resources, and would be unable to do so without the aid of foreign capital and enterprise, which they are chary of admitting from inherent dread of this leading to alien domination, and the ever-present belief that it is aiming at their sovereign rights. The opening out of the various mineral deposits would furnish material for export as well as supplying local requirements.

Of raw products, other than grain of all kinds, the principal are wool, cotton, and silk. The province could be made self-supporting, and the necessity of looking to the Central Government for a subsidy would disappear. It will interest merchants and others in Europe and elsewhere to see some details of the silk industry of Khotan and its potentialities. Prior to the collapse of Russia, and the resultant cessation of trade with that country, the annual production of cocoons in Khotan amounted to well over a thousand tons. Since those prosperous days the production has fallen away to such an extent that it now only amounts to some 500 tons wet, giving an approximate yield of 165 tons of dried cocoons, this quantity producing about 38 tons of spun silk. Of this total about two-thirds are exported to India, the remainder being disposed of in the local market.

Notwithstanding the excellent quality of the silk, a defective method of reeling renders it of little use for the export trade, but this is a matter that up-to-date machinery and methods would readily overcome. There are three kinds of this spun silk, each rather coarse and irregular—*i.e.*, not spun with a given number of threads. The silk,

however, leaves the "bassins" in regular threads, but the cost is high owing to the extra work required with such inadequate implements.

Another article that was formerly well known amongst the products of Chinese Turkestan is jade, but its general export and sale have fallen off in recent years, although there are extensive stretches of jade ground near Khotan; but the people are averse to disclosing them from the fear of being compelled to supply forced labour in the mines. In mediæval days the jade of Khotan was famed for its quality, and we know that jade implements were in use in Europe.

Agriculture may be considered the most important and widely spread industry, and the one on which the inhabitants depend for their existence, there being no import of foodstuffs from neighbouring states.

For the successful prosecution of trade and commerce the main essential is good arterial communication. Chinese Turkestan is deficient herein, the communications being on a par with the general administration of the province. Metalled roads do not exist, rough roads and tracks only are in evidence, and in the hills footpaths worn by sheep and goats.

The main trade route to India, with which country Chinese Turkestan has most of its commercial dealings, is from Yarkand to Leh in Ladakh, whence there is a direct road to Srinagar in Kashmir, and so to Rawal Pindi at railhead. It is thirty days' march from Yarkand to Leh by a road crossing some of the highest passes in the world, which, as a commercial route between two countries, is the loftiest in the universe. Owing to the great physical obstacles, trade is carried on at a considerable disadvantage, and every summer, during the period when the passes are open, a heavy mortality in baggage animals results. This is consequent on the high altitude, the desolate nature of the country traversed, devoid of grass or any kind of pasturage, and the different glaciers to be negotiated.

Of late years, the Government of India has done much to mitigate the difficulties and hardships of this route by the construction of supply depots for grain, the erection of caravanserais for the use of men and animals, and in generally assisting traders to overcome the natural difficulties confronting them. At points along the road improvements have been instituted and carried through with a view to rendering it easier, so that it is now very different from what it was a few years ago. The road will, however, never be an easy one for the reasons enumerated above.

Leh, the capital of Ladakh, has from time immemorial been the link between the commerce of Central Asia with India, and when Russian activities in Central Asia threatened to endanger this ancient connection, it was thought that the trade might cease with the extension of the Russian railway to Andijan in Russian Turkestan, some thirteen days' march from Kashgar, whence there is rail communication with Europe and the Near and Far East. This was a great and obvious advantage over the long and arduous journey from India. The construction of this railway provides a comparatively cheap and rapid means for dealing with the mineral and other products of Central Asia, and, with the establishment of a stable government, efforts will undoubtedly be made to tap this new and promising ground.

There is another and possibly cheaper method of communication, via the Black Sea to Batoum, thence by rail to Baku on the Caspian Sea, and across to Krasnovodsk, the starting-point for the Andijan railway.

Brief mention should be made of the potentialities of the cotton and jute industry of Chinese Turkestan. Both are of excellent quality, and could be turned into a thriving trade if exploited on scientific lines; for the soil, labour, and material are at hand to co-operate with exploratory enterprise.

Surveys have been made in a perfunctory way for the

laying of a railway from railhead in China Proper to Turkestan, and the proposed track has been selected as far as Urumchi, fifty-four days' march to the north-east of Kashgar, but beyond this nothing has been done.

With the resumption of normal conditions in Central Asia there will come a trade boom, and it is of interest to detail the articles which will command a good market :

Household utensils : all kinds.

Hardware : Axes, screw-drivers, hammers, locks, hooks, horseshoes, chisels, files, saws, carpenters' and blacksmiths' tools, enamelled ware, lamps, heating stoves for coal, wood, and oil.

Ploughs, harrows, mowers, reapers, sickles, and threshers.

Dairy appliances and utensils.

Machinery for factories.

Foodstuffs : Groceries, salts, vermicelli, sago, tapioca, tea, proprietary articles, patent medicines, etc.

Articles of clothing : Boots and shoes, dress materials, cotton goods, blankets, underwear, etc.

Miscellaneous articles : Drugs, medicines, dyes, paper, stationery, and material for setting up printing presses.

The above list applies to both Russian and Chinese Turkestan ; indeed, the larger demand will occur in Russian territory, where the population is more advanced, and where there is a higher standard of civilization and culture.

CORRESPONDENCE

THE PROPERTY OF BRITISH NATIONALS IN TURKEY

To the Editor of THE ASIATIC REVIEW

SIR,—The debate in the House of Lords on the Treaty of Peace (Turkey) Bill drew attention to the burning question of the claims of British nationals, not against Turkey, but against H.M.'s Government, for reparation for losses sustained before a state of war existed with Turkey, as a direct consequence of the action of our Government in requisitioning certain warships which were being constructed in this country.

May I beg your indulgence to put forward the point of view of the large number of British subjects who have suffered?

The losses inflicted upon British nationals resident in Turkey did not arise solely as a consequence of war. This is the distinctive feature of their claims, which places them on a different plane from those sustained by their fellow-subjects in, say, Belgium or France, or of their Allies (French and Italians) in Turkey—a distinction which has been persistently ignored by H.M.'s Government.

I pass over, for the moment, the claims which arose after Turkey entered the war, and will examine them and their fate under the Treaty of Lausanne later.

The facts in respect to the pre-war claims are the following:

In the year 1914 the economic progress of Turkey seemed assured. The Government of the day, though chauvinistic, was seriously bent upon commercial development. Great Britain was the favourite foreign state. Our

financiers were co-operating with the Turkish Government in extensive schemes, such as the extension of the Constantinople quays; the projected building of graving docks and modern dockyard in the Golden Horn; harbour works for Samsoun and other ports, irrigation works on the Euphrates; railway expansion and so forth. The organization of the navy was put under the direction of a commission of British officers, and a comprehensive programme of naval construction was placed in the hands of British constructors in this country. For the first time in the history of Turkey a spontaneous national response was given to an appeal for public subscriptions for the navy. The sum of £5,000,000 had been collected and paid to the ship-builders for the two principal ships. The vessels were practically ready to put to sea in July, 1914, and the crew for one of them, under the command of Raouf Bey, was actually in England. Excitement in Turkey ran high, as the people were eager to see, in material form, the reward of their patriotic sacrifices.

Then the blow fell. On or about August 1, 1914, Great Britain decided to requisition the battleships. The effect of this "bolt from the blue" upon the high-strung nerves of the Young Turks can be readily imagined, especially as H.M.'s Government did not take the precaution of returning to Turkey the £5,000,000 paid on account of the ships.

Reaction was instantaneous. From being the favourite foreign state, we became the most detested. Action promptly followed the outcry in the Press, and a campaign of deliberate and avowed reprisal was launched against British nationals.

Though Turkey was still a neutral state, the property of British subjects was confiscated right and left. Ships with newly freighted cargoes of grain were forced to discharge. Factories were relieved of their machinery; merchandise was requisitioned, property occupied, and, in general, no opportunity to persecute the British was overlooked.

It was this action of Turkey, taken before a state of war existed, which gave rise to the claims which form the object of this appeal. Do the British claimants ask too much when they urge that these pre-war losses should rank as a charge against the £5,000,000 ship-money? After Turkey joined in the war as an enemy state, the British Treasury seized this sum, but has not put one penny of it against the special category of claims to which it directly gave rise.

It is urged, therefore, on behalf of the sufferers, that these pre-war claims of British nationals resident in Turkey (probably under £3,000,000) should, in all justice and equity, be paid out of the £5,000,000 casually acquired by H.M.'s Treasury. Mention was made above of the second category of claims against Turkey, namely those which arose after November 1, 1914, when Turkey joined the Central Powers.

No exceptional treatment is asked in favour of British claimants, as distinct from their Allies, in respect to these later claims. It is important, however, to examine the course of the peace negotiations with Turkey, and to consider whether the final terms offered to British claimants, by their Government, are in accordance with the word and spirit of the final treaty of Lausanne. To do this, it is necessary to remember that there were no less than three separate and distinct peace conferences with Turkey.

The first of these was the Sèvres Conference, at which a treaty was imposed upon vanquished and prostrate Turkey. For the purposes of this letter it is sufficient to note one point only of this treaty—namely, that the sum set apart to meet Allied war claims was T£15,000,000 (about £13,600,000) in the form of bonds, the service of which, as regards interest and repayment, was secured by certain revenues, and, collaterally, further guaranteed by the sum of T£5,000,000 gold (about £4,500,000). This gold had been deposited by Turkey in Berlin and Vienna as guarantee for the first issue of paper money, and passed to the Allies through the treaties of peace with Germany and Austria.

The second peace conference was held at Lausanne at the end of 1922 and early 1923. Turkey came to this conference, no longer as a defeated

country, but as a victorious and militant state, who could discuss terms of peace on terms of equality. The Sèvres Treaty was naturally torn to shreds as concession after concession was made to Turkish demands. Important territorial changes were agreed to, all mandates, all military and financial control, and so forth, were swept away, but still Turkey was not satisfied. The Capitulations, which had been whittled down to a mere shadow, were still objected to; the Straits Convention remained unacceptable, and agreement had not been reached in regard to war indemnities, in respect to which Turkey demanded the return to her of the warship-monies, spoken of as the sum of £7,000,000 (with interest to date). In a final effort to obtain immediate peace, Lord Curzon offered to return this sum by contributing it to the war-reparation pool. Nevertheless, the conference broke up without peace being signed.

Finally we come to the third peace conference, again held at Lausanne, and at which a final treaty was agreed to by all concerned. At this conference, concessions to Turkey were again the order of the day. The last vestige of the Capitulations disappeared, the Straits Convention restored to Turkey her sovereignty and control over the whole area. Even as regards war indemnities Turkey had her way; in fact, she does not pay a single penny out-of-pocket. It is Article 58 of the Treaty that deals with this matter. It will be seen from this article that all Turkey did was to withdraw her demand for monies to which she had long since said farewell. Turkey graciously permitted the Allies to retain the monies deposited at Berlin and Vienna (the property of these countries), and with equal condescension withdrew her claim to the warship-money, on the condition that she was discharged from all claims for war indemnities. Ismet Pasha speaks of this "conciliatory action" as having cost his country £12,000,000—namely, £5,000,000 Austro-Germany money and £7,000,000 for the warships. These, together, formed the *quid pro quo* for the cancellation of the war claims against Turkey. Turkey thus disembarassed herself of indemnities and left the Allies to arrange the division of the spoils amongst themselves.

It will be remembered that the Sèvres Treaty reserved £13,600,000 for Allied claimants, of whom by far the most interested is Great Britain.

The negotiations which followed amongst the Allies, which resulted in the Agreement of Paris of November 23, 1923, are not published. But starting from the known basis that as far as Turkey was concerned, £12,000,000 had been ceded, and in view, on the other hand, of the final settlement decided upon, the course of the negotiations may logically be assumed to have taken the following course :

The Allies recognized that Great Britain had special interests in the warship-money in view of the definite claims that arose in connection with the requisitioning of these ships. On the other hand, Ismet Pasha certainly ceded this money against the Allied claims as a whole. Therefore all the Allies have some interest in the matter. Compromise followed, whereby Great Britain threw into the general pool an odd sum of £800,000 (nominal value), Turkish treasury bonds, part of the ship-money, and was left with the remainder, about £5,000,000, to meet the pre-war claims of

her nationals, leaving the war-period claims, however, to participate in the general pool.

It is felt that were the facts known to the members of Parliament, a spontaneous demand would be made for justice to the sufferers, and it is on behalf of these sufferers that I thank you for the opportunity accorded me for stating their case.

I have the honour to be, Sir,

Yours faithfully,

J. C. THOMSON.

10, LOWTHER ROAD, BARNES, S.W. 13.

March 20, 1924.

PROCEEDINGS OF THE EAST INDIA ASSOCIATION

CONTINUITY IN INDIAN ART

By J. C. FRENCH, I.C.S.

I SHOULD like to preface my remarks by saying that I shall make no attempt to cover the whole field of Indian art. Such a task would far exceed the limits of time of a single afternoon. I shall merely attempt to establish the continuity in Indian art from typical schools of the different periods.

The earliest examples of Indian art at present known to us are massive, free-standing, archaic figures, larger than life, of the kings of the Saisunaka dynasty, of the sixth and fifth centuries B.C. Of the sixth century, the statue of Kunika Ajata-Satru is in the Muttra Museum, and a female figure from Besnagar is in the Calcutta Museum. In the same museum are two statues from Patna, inscribed with the names of Saisunaka kings of the fifth century B.C. In spite of their archaic aspect and worn condition, the massive flow of the line and a certain elemental simplicity mark them as the ancestors of Indian art.

For our next examples of Indian art we have to go to the period of Asoka, in the third century B.C. The mature character of this art would indicate that it is the fruit of a period of artistic activity. However, the gulf which divides it from the Saisunaka figures remains to be bridged. The Calcutta Museum possesses some magnificent specimens of this art, lions sculptured in stone. They are grand and magnificent in line and design, and though decorative simplification has been carried out to the full, still the figures are full of a strange and mysterious vitality. Now this peculiar quality, which we note in this early specimen

of Indian art, is characteristic, and will confront us again and again in Indian art throughout the centuries. So let us consider it for a moment. Why is it that when we come to these lions of the Asokan artist we find a force, a significance, and even a certain mysterious vitality far transcending the efforts of the most painstaking modeller, who copies his subject with the fidelity of a photographer in stone? The explanation is to be found in the Hindu doctrine of *Yoga*, the attempt to penetrate past *Maya*, the superficial illusion of the details of the outward form, to the essential reality of things. Bhava, the third of the ancient Hindu laws of the art of painting, and the characteristic principle of Indian æsthetic theory, which may be rendered as the influence of spirit on form, is concerned with this idea. It is interesting to note that the contemporary movement in art, sometimes known as Post-Impressionism, from Cézanne to such living artists as Matisse and Picasso, frequently appears instinctively to incline in a similar direction—that is to say, that the artist devotes all his energy to attempt to portray the essential character of his subject, to the neglect of its details and environment. I am aware that the artists of the Asokan age were Buddhists, and that the doctrine of Yoga is usually associated with Hinduism in its present Brahminical form. But Yoga is also practised by Buddhists, and it must not be forgotten that Buddhism originated from Brahminism, and was afterwards reabsorbed into it, and that until the twelfth century A.D. both are to be regarded as elements of Hinduism. The Buddhist artist of the age of Asoka could not fail to be influenced by such an expression of the essence of Hinduism as Yoga, and the result appears in his work.

At Sarnath are to be found some Asokan pillars surmounted by lions. Round the pillars below the lions are sculptured elephants, horses, and bulls. Equally with the lions above them they illustrate the essential qualities of the Asokan art.

Assyrian-Persian influence has been traced in the Asokan

art. This is very likely correct, but when this art is compared with the art of Assyria and Persia, a profound difference is noticeable. The art of Assyria has a certain direct brutality, to be condoned certainly for the unerring æsthetic sense and instinct for decoration and design. The Indian artist aims at something more, and by concentration and simplification of design attempts a more ideal and spiritual aim. The foreign influence is completely absorbed in the native art, and this is a characteristic which will meet us again and again in the course of Indian art.

Soon after the Asokan sculptures comes the Bharut school in the second century B.C. In bas-relief, on dark red stone, the Bharut figures have much of the elemental significance of the Asokan art. Like the lions of the Asokan pillars, in spite of an extreme decorative simplification they are full of a mysterious life and energy.

At Sanchi, in the first century B.C., we find sculpture illustrating Buddhist legends. There is a charming example to be seen in the British Museum, a figure of a Yakshini. Both in artistic conception and technique this work is a natural consequence of the Bharut sculptures. A still finer figure is to be found at Sanchi itself, which has been reproduced by Mr. Coomaraswamy in his *Visvakarma*.

The claim which the school of Gandhara has on our notice is diametrically the opposite of that of the art which we have just been considering. It commences in Northern India in the first century A.D., as the south-eastern outpost of Hellenistic art, and from the æsthetic point of view should be considered rather with Greco-Roman art, and other products of Hellenism, than with the art of the East. The similarity of the figures and postures to the Hellenistic statues of Asia Minor and Europe strikes the eye at once. And yet there is a subtle difference of atmosphere. The bright alert joyousness of Greece, the sense of the divine in the human form, of the immanence of God in man, is absent, and instead we meet the heavy brooding mystery

of Asia. Gandharan art has been described as Apollo with a moustache. But even this Western exotic helps to illustrate the essential continuity of Indian art. The art of Muttra we find to be intermediate between this Indo-Hellenistic school and true Indian art, while at Amaravati and in the Gupta school the art of India predominates.

It is after the Gupta period, from the end of the Hun inroads to the Muhammadan conquests, that Indian art in sculpture attains to one of its greatest heights. The statues in the temple of Ellora, the rock carvings in the caves of Elephanta at Bombay, and the statues and carvings throughout the temples and shrines of Northern India are the proofs of this assertion.

The paintings in the caves of Ajanta, the oldest existing paintings in all Asia, are astonishing monuments to the artistic genius of India. According to Lady Herringham's account, some twenty different styles are observable. Some show Hellenistic influence; a few Chinese. But the majority are purely Indian, and recall the mediæval Italian art. In this they resemble the art of the Hill Rajputs, which is their lineal descendant, though separated from them by a thousand years in time. The paintings are usually dated from the first to the seventh centuries. They are described in the India Society's book, to which Lady Herringham, Mr. Laurence Binyon, Professor Rothenstein, and Dr. Thomas have contributed articles. Photographs have been taken by M. de Goloubeff, and are in the Musée Guimet in Paris. A complete coloured photographic record is being prepared by H.E.H. the Nizam's Government, and will be published shortly.

The paintings of the caves of Ajanta form a fitting commencement to the brilliant period of Indian art on which we are now entering. The Hellenistic influence has now been completely assimilated, and a tense, nervous, vital style developed, capable of responding to the highest demands which the artist could make on it. The significant

form, full of a strange and mysterious vitality, which meets us in the early Buddhist art, is characteristic of this period. The artist sets himself a task of almost superhuman difficulty, to express in stone and line transcendental conceptions, and in so doing rises to the heights which mark the great arts of the world. In the same region as Ajanta, Aurangabad, is to be found a wonderful colossal Buddha. It is carved in the living rock in the hills above the city. The statue is in sorrowful aspect. Pose, expression, and design together contribute to the result, and no one looking on it can fail to realize that here the artist has succeeded in rendering into stone the sorrow of the whole world. The caves of Elephanta are another example of the genius of Hindu art. The magnificent Trimurti of Brahma, Vishnu, and Shiva is the centre and pivot, both architectural and æsthetic, on which all the sculptures hang.

We now come to the carvings and sculptures of the other temples and shrines of Northern India, and the writer would prefer to take his examples from the province which he knows best, Bengal. And historically this is convenient also, for as the waves of the Muhammadan invasion from the west reached Bengal latest of all the provinces of Northern India, so the great Hindu art flourished longest here, fine works of art being found down to the twelfth century. This art in Bengal is generally considered to have reached its height under the Pal dynasty in the ninth and tenth centuries. This sculpture can be confidently asserted to be second to none in the whole of India. At this period Bengal was the seat of an empire which extended throughout Northern India to Gandhara, and political and military triumphs were accompanied by artistic supremacy. The contemporary art of the neighbouring province of Bihar, as far as it is known to the writer, compares unfavourably with that of Bengal. In the figures from Bihar there is something heavy, dull, and inert, whereas the Bengal figures have a tense and nervous energy, and a certain mysterious sense of vital

significance which is always characteristic of Indian art in its highest phase.

It seems extremely probable, though the point has not yet been definitely established, that the Hindu art of Java is to be derived from Bengal. Though this may be so, still the differences between the two arts are striking and interesting. The art of Java, the work of artists resting safe, after the perils of their voyage from India, in a soft and enervating climate, seems to dissolve into a soft luxuriance. The art of Bengal possesses the tense and nervous character which marks the more virile art of the Pal empire. There is also the touch of austerity, the suggestion of Himalayan grandeur, absent from the softer art of the south. The same essential qualities which we found in the art of Asoka and Bharut meet us here again, but expressed in a more elaborate and sophisticated technique, for the Hellenistic styles of Gandhara have at length been completely assimilated and transformed into the brilliant lines of this art. The writer has in mind a stone image of Ganga, the female personification of the Ganges river, which is to be found in a temple of Kali in a small village near the Sandarban jungles on the Bay of Bengal. Carved in bas-relief on stone, in its delicate grace and flowing line, it is reminiscent of some Greek nymph or dryad. But the tense and nervous pose and peculiar sense of mysterious and significant vitality stamp it as the work of an artist of a land far to the east of the Hellenic world. In the same district as this image of Ganga is to be found, there is a splendid Buddha, carved out of the same brilliant black rock. The temple of this Buddha, a bamboo hut with a mud floor, is a strangely simple setting for such rich and splendid art, which once adorned the palaces and temples of princes. It is a curious example of the extent to which Buddhism has faded from the memory of the people in the land of its birth, that this image is commonly known in the neighbourhood as an image of Shiva. An unconscious tribute

is paid to the ancient faith in the annual fair which is held round the temple which houses it.

In the temples and shrines throughout Bengal splendid works of art are to be found. Even down to the twelfth century the art appears to have flourished with only slightly abated vigour, and to have ceased only with the confusion consequent on the Muhammadan invasions.

So far we have traced one element in Indian art throughout the centuries, the combination of artistic and decorative simplification with a certain mysterious sense of life and vitality, culminating in the great mediæval period in an art possessing an extraordinary tense and nervous force. There is another aspect of Indian art to which we must now refer, and that is *bhakti* or spiritual ecstasy. Mrs. Strong, the well-known authority on Italian art, in a recent lecture remarked on the element of ecstasy as a characteristic of mediæval Italian painting, and one which modern art seems unable to express. Professor Rothenstein has called attention to the existence of this quality in Indian art, and to the prominent and significant position which it holds.

In the paintings in the caves of Ajanta this element in Indian art is admirably illustrated. It is only necessary to refer to the well-known painting of the mother and child offering sacrifice to Buddha to demonstrate with what æsthetic perfection these artists could express this sentiment.

Examples are to be found in the Indian Museum in London. I refer, of course, to the magnificent metal images which have been lent by Lord Amphill. The figure of the young Sundara Murti Swami, the Saiva ascetic in an attitude of rapture, admirably expresses the idea of *bhakti*—religious ecstasy. This image dates from the Chola dynasty in the eleventh century, and was found in the Tinneveli district in Madras. Of the same period is the magnificent image of the Dancing Siva, the dance which shakes the universe and hurls the worlds to destruction.

We come at an appropriate moment to the art of Southern India, for it is to Southern India that we must look for the main continuing thread of Hindu art after the twelfth century in Bengal. On our way south we meet the splendid sculptures of Konarak in Orissa, which date from the thirteenth century. The mention of Konarak recalls the grand and magnificent sculptured horses, which aroused such intense admiration in Mr. Havell and succeeding critics. The expression "main" thread of Indian art is used advisedly, as I have no intention whatever of suggesting that Indian art was confined to Southern India after the twelfth century. In Bengal itself I have come across some most singular and interesting examples of art considerably later than the Muhammadan invasion. But speaking generally and in our present very imperfect knowledge of this subject, it may be claimed that after the twelfth century the main stream of Indian art is to be found in that part of India which escaped the destructive flood of Muhammadan invasion—namely, the south. I cannot forbear quoting Mr. Havell's description of the temples of South India in the fourteenth century :

"Essentially Gothic in feeling, it will bear comparison with the best work of cathedral craftsmen of mediæval Europe. Dravidian art reflects the wild luxuriance and mysterious beauty of those dense jungles of Southern India, haunted by rakshasas and fearsome beasts, through which Rama and his faithful monkey allies forced their way to rescue Sita from her prison in the stronghold of the demon-king, Ravana. In the wonderful pillared halls attached to the temples of Southern India is concentrated, as it were, the essence of the beauty of a tropical forest, perfectly ordered to fulfil architectonic and æsthetic purposes. No one who has not seen them can have any conception of their great beauty and perfect art."

In the sixteenth century a sudden and dramatic change came over India which is naturally reflected in the art. I refer to the Mogul conquest. The dominant power in

India remained Muhammadan, but for the space of a century the imperial throne was filled by sovereigns of a liberal and sceptical spirit, destitute entirely of narrow fanaticism, and, above all, magnificent patrons of the fine arts. Under their régime sprang up and flourished that brilliant jewel in the artistic world of India—the miniature painting of the Great Moguls. What constitutes a fine Mogul painting? The certainty and precision of a medal-list, a cameo-like fineness of brush outline, a severe economy of line, and a truly marvellous delicacy and refinement. A certain high serenity pervades the whole work. This Mogul art in its technique is marked by the same perfection of taste and æsthetic sense which characterize the Persian artists of the Timurid and Safevid periods. In spirit it is no unworthy record of a great imperial race.

In one important respect the Mogul school preserves one of the main elements in the continuity of Indian art. For the artist of the great period of Mogul art, though naturalistically inclined, always keeps in view the highest aim of the artist—to penetrate past the outward form to the soul of things. The Mogul portrait, in which Mogul art found its fullest expression, strikes through appearances, and reveals to us the essential character of the man portrayed, in greatness or littleness, weakness or strength.

There is another aspect of Mogul art which is of interest in any consideration of continuity in Indian art—namely, its foreign origin and assimilation in the main stream of Indian art. The Mogul conquerors brought with them Persian art. This art in the sixteenth century was rapidly absorbed by the indigenous Indian art, and the union produced the Mogul art, an undoubted Indian school. So we see again, as in the case of the Gandhara art, foreign and alien elements being assimilated and absorbed in the mighty age-long stream of Indian art.

With the decay of the Mogul empire in the latter part of the seventeenth century the old indigenous art of India arose again in all its force and vitality in the Himalayan

Rajput painting. Between the Ajanta paintings and the Mogul art we have not mentioned painting, and it used to be asserted that the Mogul conquerors reintroduced the art of painting into India. This statement has now been disproved. Some illuminated manuscripts from the eleventh to the thirteenth centuries have been discovered. One, the property of the late Mr. Vredenburg, is published in the *Rupam* magazine for 1920. Another is to be seen in Mr. Coomaraswamy's Portfolio of Indian Art in the Boston Museum. In the same publication is reproduced a picture from a Gujerat manuscript of the fifteenth century. Examples of paintings from Rajputana in the sixteenth century are to be found in the principal collections of Indian paintings. It has always seemed to me that this art, though of great interest and artistic merit, has a certain wild element about it—a suggestion of an animal at bay, and fighting for its life. And indeed, from the Muhammadan invasions to the accession of Akbar, such in very truth was the position of Hinduism. But when, in the latter part of the seventeenth century, the artists had to leave the Mogul Court and seek for new patrons and new fields of activity, Hinduism was already safe. Hence the serenity which marks the art of the Himalayan Rajput painting and recalls the spirit of the art of India before the stormy period of the Muhammadan invasions. This Himalayan Rajput painting arose in the latter part of the seventeenth century at the Courts of the Rajput princes in the Himalayas, and is one of the most charming phases in the long history of Indian art. It combined the refinement and elegance of the Mogul brush with the energy and vitality of the older Indian art. The mysterious vitality and significant form, bhakti, religious ecstasy or devotion, of the older artists here meet us on all sides. With this art we find ourselves in modern times. Up to a hundred years ago fine works were produced in this school, and artists were still working at the beginning of the present century.

Is the traditional art of India dead? Anyone acquainted

with the school of painting in Calcutta initiated by Mr. Abanindranath Tagore will be inclined to dispute such an assertion. We have seen how Assyrian, Hellenistic, Persian influences have been absorbed in the age-long stream of Indian art, but the contemporary Indian artist has a harder task than his forefathers if he is to resist being overwhelmed by the immense flood of Western art, and to succeed in turning it to his own purpose.

DISCUSSION ON THE FOREGOING PAPER

A MEETING of the East India Association was held at Caxton Hall, Westminster, S.W., on Monday, February 18, 1924, when a paper was read by J. C. French, Esq., I.C.S., on "Continuity in Indian Art." Lieut.-Colonel Sir Francis Younghusband, K.C.S.I., K.C.I.E., was in the chair, and the following ladies and gentlemen, among others, were present: Sir Lionel Jacob, K.C.S.I., Sir John G. Cumming, K.C.I.E., C.S.I., Sir William Ovens Clark, Lady Kensington, Lady Oldfield, Lady Stone, Mr. A. Porteous, C.I.E., Mr. F. H. Brown, C.I.E., Mr. N. C. Sen, O.B.E., Mrs. Jackson, Mrs. Drury, Miss F. R. Scatcherd, Mr. N. M. Heeramaneek, the Maulvie A. R. Nayyar, the Viscomtesse D'Arcy, the Hon. Anne MacDonnell, Mrs. Kelly, Miss Buchanan, Mrs. Gates, Mrs. G. Nelson, Mr. F. C. Channing, Miss French, Mrs. Hope Wallace, Miss Vesey, Lieut.-Colonel C. C. Anderson, Colonel Warliker, Mrs. Sedgwick, Mr. E. Worthington, Miss Belgrave, Mr. F. W. Brownrigg, Mr. E. C. Emerson, Miss D. Soloman, Mrs. Herron, Mrs. Barrett-Lennard, Mr. P. Mansel, Mr. P. Weston Edwards, Mrs. Fitzgerald Waters, Mr. W. D. Westbrook, and Mr. Stanley P. Rice, Hon. Secretary.

The CHAIRMAN: Ladies and Gentlemen, our Lecturer to-day, Mr. French, as you know, has had a long record of distinguished service in the Indian Civil Service, and he has devoted the very scanty leisure which Indian civil servants get from their official labours to the study of Indian Art. It is needless for me to state to an audience like this how very favourable both to India and to England it is that the members of that Service should do this sort of thing in their spare time. In the first place, it must be a matter of enjoyment to themselves. I am perfectly certain that if, after their very arduous tasks, they find time to devote their attention to Indian art, they will go back to their studies and their work with refreshed mind and spirits. It must also be a source of satisfaction to those among whom they work that these people should be able to feel that the administrators of India are interested in, appreciate, and enjoy Indian art as much as they enjoy it themselves. They are rather apt to get the impression that trade, politics, and sport are the things in which we Englishmen are chiefly interested. We went originally to India to trade, and from trade we became immersed in politics, and, of course, wherever Englishmen go, they naturally bring sport with them. But these three things—trade, politics, and sport—are not the be-all and end-all of an Englishman's interests; so that it is of very great value and importance that a man like Mr. French, who has been over thirty years in India, who has devoted his spare time to other things than purely administrative work, should come back to England and give us the benefit of his studies in art, and thereby, in the first place, increase our enjoyment of one of the good

things in life, and in another way show the Indians that we Englishmen do appreciate those things of the spirit in which they are so deeply interested themselves. I have no doubt that Mr. French not only derived great enjoyment himself from his study of Indian art, but he has done something towards cementing the ties which bind India and England together. (Applause.)

The paper was then read.

The CHAIRMAN: Ladies and Gentlemen, we have listened to a very interesting summary of Indian art right up to the most modern times, when it comes in contact with European art. The great question is whether it is to be stimulated by this contact and derive from European art some of its best qualities, or whether it is better to continue as it was before this contact. That is the great question which we have to answer. I do not know whether anyone here present would like to take part in the discussion on this most interesting paper, and give their views either on Indian art or of the effect of European art upon the art of India.

Mr. STANLEY RICE thought they were very fortunate in having induced Mr. French to write his paper on art, because of late they had had rather a succession of economic and administrative papers. The paper opened up a much larger question than it actually dealt with. He was not an expert in sculpture or architecture, and it would be presumptuous for him to criticize in any way what Mr. French had said, but he would like to call attention to the larger aspect of the question—namely, the existing general Asiatic art, more particularly music and literature. In his opinion, it was the arts, whether of India, China, Japan, or any other country in Asia, which brought them nearer to the people than administrative methods and the benefits which they were so fond of saying the English had conferred upon India. The English had done nothing towards the promotion of Indian art in India. They had preserved some of the old sculptures and paintings, but all their efforts in modern art had been to direct Asiatic art into Western currents—that is to say, the modern schools of art in the various Presidencies were run entirely on Western lines: As to music, it was a good thing they had not attempted to meddle with Eastern art as it existed. The Hindus were prouder of their music than anything else, though he did not say that they were not also proud of their sculpture. They considered the art of music, as did the British, to be divine. He would remind them that the early Christians' idea of Heaven was playing and singing music for ever. Just as the Greeks put their music into the hands of their most glorious god, so the Hindus derived their music direct from Siva and from the eternal gods. It was to those gods that the Hindus ascribed their own divine art. The English people were apt to be prejudiced in dealing with Indian literature, because they had been brought up on Greek literature, but there were parts of the Ramayana and Mahabharata which were quite as good as, if not superior to, anything in the Iliad and the Odyssey. There was to-day more appreciation of Asiatic art than formerly. They would never understand India without understanding its

art. It was through the art of India that they got to know the people. He would like to see the Indians come forward in their own natural way and become artists, as they undoubtedly were. The Lecturer had been attracted towards sculpture and painting, but he (the speaker) had been more attracted by the other arts. The Chairman had referred to Mr. French as having devoted his spare time to the study of art, but, consciously or unconsciously, civil servants who devoted their leisure to such objects were working hard for a better understanding between Hindus and Englishmen, who did not understand Indian art. It did not follow that, because they did not understand the Hindu music, sculpture, and literature, that those things were not great art. It was not the fault of the Hindus; the fault lay in the ignorance of the British.

The MAULVIE ABDUR RAHIM NAYYAR, Imam (Ahmadian Movement in England), speaking as a Muslim missionary and friend of England, observed that the Lecturer had used the phrase, "destructive flood of Muhammadan invasion" and the like words, and had thus ignored the large amount of constructive work done by Muslims in India. He wished to point out that Moghuls whose contribution to Indian art had been rightly acknowledged and praised by the Lecturer were Muhammadans; and the late Sister Neviditta had once enumerated 150 blessings of Muhammadan rule to India.

Sir JOHN CUMMING said that although the Lecturer had limited his remarks perhaps unconsciously to the fine arts, the term "art" in ancient India implied no such distinction, and embraced architecture and those handicrafts which were of an artistic nature, as well as sculpture and painting. He also wished to point out that in ancient India art was inseparably connected with religion, just as in the social life of the people religion formed a large portion of their social system.

Colonel Anderson asked if Indian art had not been derived from the Aryan art.

The LECTURER said this was a difficult question to answer, because he did not know what Aryan art was, never having seen any specimens of it. He might also say that he had never seen any specimens of the original Dravidian art. In his paper he had only been concerned with Indian art as he found it. He thought the question of the origin was a very difficult one.

Miss SCATCHERD asked what was the conception behind the dancing Siva, which dance was said to have shaken the universe. Were worlds being destroyed without being replaced, or was their conception that worlds were being destroyed to make way for better worlds?

The LECTURER replied that as far as he had been able to understand the Hindu system from talking to Brahmins in India their idea was that there was an incessant change; worlds were destroyed and new worlds were created incessantly.

Mr. STANLEY RICE pointed out with regard to the dancing Siva that Professor Rothenstein interpreted the dance as the cosmic harmony of the universe, which did not seem to be quite the same view as that held by Mr. French.

The LECTURER pointed out that Siva was the destroying attribute of the Deity, and he ventured to think that the cosmic harmony was more the part of Vishnu, the Preserver. With regard to the remarks of Mr. Maulvie A. R. Nayyar he by no means wished to imply that the Muhammadan invasion in India was wholly destructive, because the Muhammadans had introduced many new elements into art and literature in all directions, and they were most valuable in India. Nobody would deny that for one moment. There was, however, no doubt that when the Muhammadans came into India they did a certain amount of destruction. He had seen mosques built out of the fragments of Hindu temples, which was not exactly conserving art. He agreed with the remarks of Sir John Cumming that no hard-and-fast line could be drawn between fine and decorative art. A Persian carpet, Muhammadan inlaid work in India, and ornamental work generally was as much a work of art as a picture or a statue. He (the Lecturer) had selected pictures and statues because they were the most salient and striking forms in which art could be shown, the decorative forms of art being rather more subtle and more difficult to discuss in a limited time.

A hearty vote of thanks was by acclamation accorded to the Lecturer and the Chairman. The proceedings then terminated.

THE UTILIZATION OF THE UNDERGROUND WATER OF INDIA

BY SIR ALFRED CHATTERTON, C.I.E., F.C.G.I.

THE area under irrigation in India now exceeds 80,000 square miles, of which roughly one-half is supplied with water from the great irrigation works which have been constructed, mainly by the British Government, during the last hundred years. Minor irrigation works including under this term wells, tanks, spring-heads, and small river channels, are responsible for the other half. They are almost entirely the product of private enterprise, and the labour expended upon them in the past represents no inconsiderable part of the savings of the agricultural community. Of these minor works "wells" are by far the most numerous, and, as a means of tapping the underground water, the problems which they present to-day are of sufficient importance to merit our serious study.

We may assume that from time immemorial wells have been sunk or excavated, and that water has been lifted to the surface by means not very different* from those in use at the present time, but it is only since the *Pax Britannica* was established throughout the land that conditions have been favourable to a rapid development of well irrigation.

* It is interesting to note that Mr. C. M. Doughty in his "Travels in Arabia Deserta" draws attention to the similarity of the methods of lifting water from wells in Arabia and India. His description of the camel water-lifts in the great well-pit El-Haddaj at Teyma shows that exactly the same ingenious principle has been employed in designing the self-emptying water bucket, whether made of camel leather in Arabia or of tanned buffalo or cow hide in Madras; also that the well camels descend a steep slope when drawing the bucket up the well just as do the cattle working a *kavalai* in India. *Vide* "Travels in Arabia Deserta," vol. i., p. 292.

The Indian Irrigation Commission (1901-1903) reported that the total area dependent on wells was 16 million acres, and after a very careful inquiry concluded "that it may not be sanguine to look forward to a period when the area under well irrigation throughout India will have doubled." Twenty years later—and be it remembered that during these twenty years strenuous efforts have been made to improve agriculture—there is no evidence of any decided movement in the direction of increased use of underground water. Neither the number of wells nor the area of irrigation under them has materially changed since the Commission presented its report. In an appendix I have brought together the official statistics which bear on this point, and a glance at them will show that whilst the figures vary substantially from year to year, depending upon the character of the monsoon, yet during the last twenty years there has been little or no permanent progress. On the other hand, the area under Government works has increased from 18·5 to 27 million acres.

The opinion of the Irrigation Commission was undoubtedly based upon the very reasonable expectation that the activity in well sinking, which had gradually developed during the latter half of the nineteenth century, would continue, and that it would be strengthened if effect were given to the specific measures they recommended to encourage it. They found that, in the twenty years preceding their inquiry, the number of wells in the United Provinces had increased by 225,000, or by 45 per cent., whilst in eleven districts of Oudh, in the period of thirty years between two settlements, the number of wells had increased from 50,835 to 119,942, or by 132 per cent. In the Punjab, between 1889 and 1899, the wells had increased in number from 262,600 to 348,700, or by nearly 33 per cent., whilst in Madras, between 1891 and 1900, the increase was from 299,500 to 470,000, or by 57 per cent. Turning to the appendix, in the tabular statement of total areas irrigated by wells in British India we find that the figures

for 1896-97, collected from an area of 537 million acres, were actually greater than for 1921-22, which were derived from 621 million acres, and that certainly from 1907-08 onwards there has been but a very slight extension of well cultivation. The Irrigation Commission attached very great importance to the utilization of underground water, and in their review of the information collected for them they observed that the extension of well cultivation had been greater where exemption from enhancement of assessment on the increased value of land, due to the construction of wells, is perpetual, and recommended that more liberal treatment in the matter should be accorded to the other Provinces in the hope of affording a similar stimulus. Further, the opinion was expressed that the most convenient and obvious method by which Government could stimulate and assist private irrigational improvements was by means of the system of State advances to the cultivating and land-owning classes, known as *taccavi*. It was recommended that a less cumbrous procedure should be adopted, and a more liberal and sympathetic attitude displayed towards those who were desirous of availing themselves of its provisions, and that in view of the uncertainty of well sinking it was thought that Government should be prepared to share some of the risks of failure, which are present in all but specially favoured tracts.

The Irrigation Commission made no efforts to obtain information about the cost of lifting water, and did not seriously consider the question of improved appliances or the application of mechanical motors to work them. It may therefore be assumed that they thought that, given a supply of water at not too great a depth, there was normally a sufficient margin of profit to insure its utilization. The evidence before them certainly justified such an assumption. A succession of severe famines had demonstrated the extreme value of underground water, and the activity displayed in making use of it did not

suggest that the economic limits of its development had nearly been attained. The partial, if not complete, arrest of progress revealed in the statistical returns indicates the necessity for a very detailed examination of the situation, and in this paper I propose to set forth some facts which I have gathered regarding well irrigation, which I venture to think will establish a case for the institution of such an inquiry.

Roughly the average value of the produce from an acre of land under irrigation from canals is worth three times as much as from an equal area of dry cultivation, and well irrigation is generally assumed to be worth one-third more, as it is largely applied to the more valuable crops which come under the general term of "garden cultivation." From the Agricultural Statistics of British India for 1920-21 I find that 212 million acres were cultivated and that nearly 49 million acres were under irrigation; that 27 million acres bore double crops, of which $3\frac{1}{2}$ millions were irrigated, so that the total area of irrigated crop was $52\frac{1}{2}$ million acres. The Government irrigation works, constructed at a cost of 78 crores of rupees, supplied water to 27 million acres, which yielded crops worth 156 crores of rupees, or approximately 58 rupees per acre. Under wells the irrigated area was $14\frac{1}{4}$ million acres, and the value of the crops is estimated at 110 crores of rupees. If well cultivation had kept progress with the expansion of irrigation under Government works, the area would have been about $19\frac{1}{2}$ million acres, and the value of the produce about 150 crores of rupees, or 40 crores more than that actually obtained. The loss to the country, however, is only three-quarters of this amount, or 30 crores, as we should allow 10 crores for the value of the dry crops grown on the land.

For the normal area of 16 million acres given in the Irrigation Commission's report, it is stated that about "a billion" or a million million cubic feet of water was required. The area is about half that of England, and a

more concrete idea of the volume of the water may perhaps be conceived from the statement that it is equivalent to $6\frac{2}{3}$ rd cubic miles. To spread this water on the land in half a year the stream would steadily flow day and night at the rate of 64,000 cubic feet per second, requiring to carry it a channel about 300 yards wide and 20 feet deep. All this water has to be lifted, on an average, probably 25 feet, and from experiments in Madras we find that a pair of cattle in good condition can draw about 12,000 gallons a day from a well in which the water lies about this depth below the ground. By a simple arithmetical calculation we arrive at the result that 2,880,000 pairs of cattle will be required to lift the water raised for irrigation from the wells of India. The capital value of so many animals is of the order of 30 crores of rupees. Equally imposing figures are obtained if we attempt to estimate the capital expended on wells. In British India, excluding Native States, there are at least 3 million wells, of which 2 million may be classed as permanent, and to have cost on an average not less than Rs. 350 each, while the rest are of small value, being of a more or less temporary character. Seventy crores, therefore, is probably what has been invested in wells, but a far larger sum would be required to construct them to-day. The cost of well irrigations depends upon the cost of keeping the cattle required to draw the water. We have seen that nearly 3 million pairs are required, and they must work for about six months in the year. In the main, the agricultural régime for each tract provides food for the cattle that are essential for the cultivation, and the ryots incur very little direct monetary outlay on their upkeep. But the land will only support a certain number of cattle in this way, and any demand for cattle in excess of this supply involves comparatively heavy disbursements in cash. The maintenance of a pair of cattle in good working condition, with a man to look after them, will involve an expenditure of Rs. 30 per month, and on this basis the work of lifting water

involves an indirect charge on the cultivation of 52 crores of rupees, or nearly half the value of the crops raised. When to this heavy burden we add the extra cost of wet as compared with dry cultivation, in the shape of increased labour and manure, it becomes evident that though the value of the produce may be four times that of dry land, there remains very little to induce the ryot to sink new wells or deepen existing wells with a view to converting dry land into wet.

I do not want to lay too much stress upon the forecast of the Irrigation Commission, or to attach too much importance to the estimates of values and costs which I have just given, but the forecast was a reasonable one, and the figures serve to indicate the magnitude of the interests involved. Clearly they establish the necessity for definitely ascertaining why well irrigation has ceased to expand in the twentieth century at anything like the rate of the last half of the nineteenth century.

It is not difficult to arrive at certain general conclusions, but it is less easy to say where they are definitely applicable. It may be noted that in the Central Provinces, where there is comparatively little well irrigation, the area has more than doubled since 1900, whilst in the Punjab, and to a much less extent in other Provinces, land formerly supplied by wells has now been brought under new canals. In Peninsular India there is a general impression, probably erroneous, that the wells yield less water than formerly, and this opinion tends to discourage investment in new wells.

In a few places well cultivation has reached its natural limit, but over the rest of the country the draft on the underground supplies is but a small percentage of what they are capable of yielding if only the water is drawn off at a lower level. Towards the end of the nineteenth century the pressure of famine was very severe, and both the Government and the people fully recognized the part played by wells in mitigating the evils of prolonged

periods of drought. As a means of combating unemployment the sinking of wells proved of greater utility than any other form of relief work. In recent years, fortunately, this stimulus has not been so continuously or so intensively in operation, with the result that there has been a relaxation of efforts to provide additions to what may be considered as protective well irrigation. These and other minor influences will not account for the situation, and it clearly must be to widely operating economic forces that we must look for adequate reasons. For instance, money payments have superseded payments in kind, and the wages of agricultural labour have considerably increased; agrestic slavery has disappeared in face of the facilities for emigration abroad or migration to the planting districts. Investment of any surplus accruing in good years is less readily made in land improvements—such as well digging—when business is transacted on a cash basis than when the farm servants were remunerated in kind. The cost of lifting water has increased, and possibly at a greater rate than the increment to the value of the produce. It would therefore seem that there is a limit to the area which ryots can irrigate from wells, which, if not yet reached, is not far off, and that any further extension will only be possible when they are supplied with more efficient appliances than those they now possess, so that a material reduction in the cost of water lifting can be insured. It is well known that a great deal of work has been done in this direction in the last twenty years, but I doubt if anywhere it has yet been recognized that the future progress of well irrigation in India depends upon the introduction of less expensive methods of lifting water than those now in use. This may be brought about either by the provision of more efficient water lifts still worked by cattle, or by the substitution for cattle of cheaper means of obtaining power, or by a combination of both improvements. There is abundant evidence now available to show that, whilst finality is far from being reached, great progress has been made in the

matter of lifting water from wells, and that it is time to seriously consider what measures should be taken to enable the Indian cultivator to avail himself of the advances.

The cultivation of sugar-cane offers analogies to the lifting of water for irrigation. The canes have to be crushed, and the work is usually done in small mills driven by bullocks. A pair of good bullocks can crush up to 400 pounds of soft cane in one hour, or say, at the most, 1 ton in a day. Where the canes are reedy and hard the out-turn is much less, and we shall not be far wrong in assuming that it will take a pair of bullocks three weeks to crush an acre of cane. Where the crops are heavy (40 tons to the acre), the bullock-power required is proportionately increased. It is essentially a capitalist's crop, but where the conditions are favourable the returns are very good. Yet the area under sugar-cane shows no tendency to expand—it is, in fact, limited by available cattle-power—and the remedy is equally the introduction of more efficient mills and oil or gas engines, preferably the latter, to drive them. India imports sugar to the value of from 20 to 30 crores a year, and all this external expenditure might be avoided, if the ryot could readjust himself to the changed circumstances of his environment consequent upon improvements in transport and industrial progress.

It is entirely beyond the scope of this paper to describe in detail the indigenous methods of lifting water. As a means to an end they are a wonderful adaptation of local resources. They represent the crystallized experience of centuries, and modern attempts to improve them have almost invariably ended in failure. Probably the most conspicuous success that has been obtained is that form of double *mhôt* which is now universally employed on the Carnatic coast, where the wells are sunk into the coarse sands of old river beds, and yield a plentiful supply of water with but little depression of the surface level. The cattle walk continuously round a central axis, and by an

ingenious arrangement of ropes attached to the lever-arms a pair of buckets are worked, the one rising whilst the other is falling. I have reason to believe that the design was due to the late Sir Gabriel Stokes—at one time a Member of the Executive Council of Madras. He originally applied it to a deep well in Cuddapah, where its merits were not very apparent; who transferred it to the more suitable wells in the South Arcot district I do not know. The ryots' water-buckets were made of leather, not too well tanned, and in recent years the partial substitution of iron buckets has released for the export market large numbers of hides. Leather ropes have disappeared, and the dependance of the ryot on the village chuckler to keep his water-bags in working order is a thing of the past. In the hope that chrome-tanned hides would greatly benefit the well irrigation, that process was started in Madras in 1903, but it cannot be claimed that as yet the chrome-tanned water-bag has made much headway in competition with the sheet-iron bucket. Nor probably is it now desirable that it should do so.

Compared with many other parts of the world, India is not at all favourably placed as regards the accessibility of its underground water. In the North of India, in the Indo-Gangetic plains, the distribution of the subterranean water is well understood. The water-bearing strata in the alluvial deposits usually consist of very fine silt, and with the ordinary country wells it is difficult to separate the water from the sand, except where a *mota*, or bed of impervious clay, exists for the well-curb to rest on, and what are really sub-artesian conditions prevail. Tube wells fitted with fine strainers have met with some success, and it is likely that in this direction lie the best prospects of future developments on a large scale. During the last ten years the Public Health Department of the United Provinces has put down fifty boreholes, aggregating a total of 11,000 feet of boring. The average yield from these tubes is stated to be 275 gallons per minute. When

a strainer 9 inches in diameter is used, the maximum inflow of water is found to be about 200 gallons per hour per foot-length of the strainer. Similar work is going on in the North of India under the supervision of the Departments of Agriculture and of Industries. On the Bari Doab Canal near Amritsar a small hydro-electric station has been set up to furnish electric energy to ultimately drive forty pumps fitted in tube wells. So far only fifteen units have been installed, and at the outset about 2 cubic feet per second were drawn from each well, and the area irrigated per well was 100 acres during the hot season and 150 acres during the cold season. The installation is an experiment to determine what effect pumping will have on water-logging caused by seepage from the irrigation canals, and what results follow, utilizing the water so raised from the subsoil for local irrigation. The chief difficulty, not yet satisfactorily dealt with, arises from the diminution of discharge from the pumps due to the clogging of the filter-meshes with salt and fine sand. Apparently the effect of pumping has been to lower the subsoil water-level about 4 feet, but it is not clear that this has had any beneficial result. The discharge from twelve wells has fallen from an average of 2 cusecs to $1\frac{1}{2}$ cusecs.

A second clearly defined region is the Deccan trap, which covers about 200,000 square miles, in which well irrigation is of very great value. There is a fair rainfall, but the distribution is precarious and the whole tract is liable to famine. For the most part the wells are shafts or holes in the trap carried down to the economic limit of depth when the water has to be lifted by cattle working *mhôts*. Little or nothing has been done to study the underground waters of the Deccan, and there is probably scope for something more scientific than the location of well sites by mysterious boxes mounted on tripods and designated "water-finders."

In the South of India the wells of the uplands are mostly rectangular holes in the superficial partially decomposed rocks, and their water-supply is mainly derived from

fissures. The rocks are not very porous and the rate of percolation is slow. The wells are frequently very large excavations, and many are sunk to the economic limit.

The wells of the Coimbatore District may be regarded as typical of this class. The "season and crop report" for 1920-21 gives the area irrigated as 391,500 acres, or about 4 acres per well. Returns obtained at an earlier date by Mr. J. K. Lancashire, the Special Settlement Officer, showed that in 65,547 wells 105,311 mhôts or water lifts had been fitted and that the average area irrigated by a mhôt was $2\frac{1}{2}$ acres. In pre-war days the cost of working a mhôt was at least Rs. 15 a month or Rs. 180 per annum, and the cost of lifting water for an acre of land in Coimbatore was, therefore, Rs. 70. To-day it is certainly half as much again, and possibly more, so that only a very intensive system of cultivation will stand such heavy charges.

The yield of the wells varies greatly, and it is a matter of luck whether or not good fissures are struck. Some twenty-five years ago there was a very smart earthquake in the district, and along a certain line in the valley of the Noyel wells which previously had been dry or had yielded but a small amount of water suddenly filled up, due undoubtedly to the opening of connections with fairly large water-bearing fissures. It is not uncommon for the ryots with long steel rods about 3 inches in diameter to jump holes in the rock at the bottom of the wells, and usually they obtain an appreciable addition to the supply by so doing. The chances of striking fissures are greatly increased by exploding a fairly heavy charge of dynamite at the bottom of the bore-holes. This practice is called "torpedoing," and though it has been tried with some success in Madras, it has not been used to the extent that its merits deserve.

A very valuable monograph on this type of well was published in 1911 by Dr. W. F. Smeeth, the State

Geologist of Mysore, which may be regarded as a model piece of work on this branch of hydrography, but it is unfortunate that the investigations were not continued, though in one instance the conclusions arrived at were verified in a well sunk 120 feet through the gneiss at the Indian Institute of Science, Bangalore. From returns relating to the fluctuation of the water-level in 2,563 wells, Dr. Smeeth comes to the conclusion that the level of permanent saturation is about 50 feet from the surface of the ground, and that above this level there is a zone of intermittent saturation which averages 8 feet in thickness.

Round the coast and in the alluvial deposits nearly all the wells are brick cylinders, built on wooden curbs and sunk through the superincumbent strata to the sand beds. The local *wudders* are skilful at this kind of work, but the methods of sinking preclude reaching depths which would insure a big inflow from a large cone of depression. It is generally assumed that there are considerable subterranean movements of water, but a little reflection will show that such movements are only possible when the hydraulic gradient is steep enough to overcome the resistance to motion. Our experiments in Madras on the flow of water in sandy beds of rivers yielded useful information regarding the working of "spring channels" and "*kasams* or *talapariges*," both local devices of extreme ingenuity for getting water out of sand where the slope of the country permits. They also explained the not infrequent failure of municipal water-supplies which are dependent on culverts or wells placed in sandy river beds. In some places artesian conditions exist, of which the most notable are round Pondicherry; in others, subartesian conditions such as have been found in the village of Surapet to the north of Madras and in the neighbourhood of Cuddalore.

It may interest you to learn how both these subartesian basins were discovered. One Gopinath Tawker, a well-known jeweller in Madras, set up an oil engine and pump

in the village of Surapet. He soon found that there was no adequate water-supply, and he requested me to visit the place and see if I could find any way of helping him. After a hot morning spent in a fruitless tramp round the village we came back to the village well, and the people being assembled I was prompted to ask questions about the origin of the well. One old man said he remembered it being sunk, and that when the work was finished, the supply not being very good, a stout bamboo was pushed into the clay at the bottom of the well. Suddenly water gushed forth, carrying sand, and the people were afraid the well would collapse; so they withdrew the bamboo and remained quiet. This was too good a story to leave unexplored, and a few days later a set of boring tools proved the accuracy of the old man's recollections. The result was that over 600 borings were put down in that neighbourhood, of which more than half tapped subartesian supplies, and the value of the land greatly increased. Tawker, I believe, purchased the village of Surapet, 150 acres, for Rs. 3,000, but when he wanted to add to his domain after the discovery of the water the adjacent land cost him Rs. 300 per acre.

To the north of the town of Cuddalore one Panduranga Moodiliar had a garden well, and in the latter he installed an oil engine and pump. Naturally he wanted more water, and to assist him we made an exploratory bore-hole 50 feet deep at the bottom of the well and obtained no result. The tools would not go any further, but a year later, with a 100 feet set, a new bore-hole was put down, and at a depth of 53 feet the clay was pierced and a valuable subartesian supply tapped that rose to a depth of 15 feet in the surface well. The first set of boring tools was purchased in Madras in 1904, and gradually as the value of the results obtained with them became apparent their use has extended for exploratory work.

The following extract from the Report of the Director of Industries in Madras for the year 1922-23 furnishes

evidence of the steadily growing interest in this method of searching for water :

"At present the Department own five power drills and forty-six hand drills, but, as pointed out in the two previous Administration Reports, these are insufficient to meet the demands of the public, and during the previous year, on the advice of the Board of Industries, Government were addressed for sanction to the purchase of the additional drills required to meet the increasing demands for assistance received from ryots. Orders were, however, received early in the year to the effect that in view of the financial stringency Government were unable to sanction the proposal to purchase additional drills.

"The total depth bored through during the year was 20,640 feet against 20,358 feet in the previous year. The deepest boring put down during the year extended to 200 feet, and 20 per cent. of the borings made were over 100 feet, the average depth of a boring working out at 52 feet."

Apart from financial stringency, Government may have been of opinion that as the results obtained with fifty-one sets of boring tools showed that the average depth bored per day was only 1 foot $1\frac{1}{2}$ inches, somewhat greater efficiency in the use of the plant provided would equally well meet the increased demands of the ryots. From the Administration Report of 1912-13, when the Department possessed a very much smaller equipment of boring tools than in 1922-23, I observe that 539 bores, aggregating 20,423 feet, were put down. One might therefore reasonably expect that ten years' extra experience at this kind of work would have enabled the men in charge to have got through a much larger instead of a much smaller amount of boring per set of tools.

The geological considerations which determine the existence of underground water in India are now well known, and it is not likely that any important new discoveries will be made. Boring for water must be regarded as an exploration preliminary to the sinking of either masonry or tube wells than as a final operation. Even when the special conditions of the locality are known there

is always an element of chance entering into the venture of sinking a well, and where the water lies at a considerable depth it is worth while to eliminate as far as possible the risk of partial or complete failure by ascertaining what lies beneath the surface at the exact spot selected for a well. The indications of a borehole interpreted by the stratigraphical geologists represents the advance made by modern science over the haphazard methods of the past even when guided by the very doubtful assistance of the "dowser." It may perhaps be not out of place to record here that fairly elaborate experiments with a professional "dowser" in Madras yielded entirely negative results as to the value of his advice. I have just given you interesting illustrations of the results that one obtained in the course of boring work, and it seems to me that little more can be done than to provide facilities for recording positive indications with adequate data to enable them to be studied by any one interested in either the details of a given locality or the deduction of general conclusions from widely scattered observations.

By this time I hope I have succeeded in conveying to you some idea of the importance of the millions of little patches of green cultivation to be found scattered over India in the hot weather in vivid contrast with the dull red or grey of the unwatered soil. In each patch a picturesque well and a pair of toiling oxen embodying conceptions of almost perfect simplicity, but marred in our eyes by the obvious imperfections of the execution and the consequent meagreness of the results. A comparatively short investigation of selected examples would probably suggest a silt clearance from the bottom of the well, the advantages of a water-tight bucket, the unnecessary height to which the water is lifted, and the probability of a considerable loss of water by seepage in the channels conveying it to the crops. A more prolonged study of the subject suggests the attainment of a wonderful result by patient, unremitting toil of man and beast, in spite of inadequate means and imperfect

knowledge. The completeness of the picture is probably its most fascinating element. It is entirely independent of the outside world, for there is nothing employed that is not of local origin. Yet, if we reflect, the peaceful character of the scene is not of local origin, but is the result of the dominance of organized civilization over anarchic tendencies, and that civilization is necessarily progressive and clamant for efficiency. Its exponents point out that very little of the subsoil water is utilized, that the cattle eat an inordinately large share of the agricultural increment due to their labours, and they suggest the deepening of the wells to obtain more water and the employment of modern sources of motive power in lieu of cattle. For the lifting of water nearly 6 million cattle are required, and for the crushing of sugar cane another million, though these latter work only part of the year. If these animals could be dispensed with there would be no necessity to grow food for them, and crops of greater value could occupy the land. Then there would be a great surplus of production beyond mere local necessity, the ryot could contribute a larger amount to the cost of the peaceful atmosphere in which he lives, and by exchanging his surplus production he could educate his children and make them dissatisfied, or he could create new desires and find the means to partially gratify them.

It is not possible within the limits of a short paper to discuss the technical aspects of the water lift question into which the problem of utilizing underground water mainly resolves itself, nor is it possible to give any account of the attempts in the last twenty-three years to arrive at a satisfactory solution. The results only with their limitations can be stated. The ideal method of lifting water is to employ electricity, but that involves considerable capital outlay, co-operation on an extended scale, and efficient lifts or pumps suited to the quantity of water to be handled at one site. Where the quantity to be dealt with exceeds 7,000 or 8,000 gallons per hour, or where, as is often the case in rock-hewn wells, there is a large subterranean storage

capacity, the centrifugal pump provides for a much smaller inflow an efficient and perfectly reliable method of working. Although only a comparatively small percentage of existing wells are capable of supplying enough water for a centrifugal pump, still the actual number is large, and there is but little doubt that it would be greatly increased by deepening suitable wells and drawing the water from a lower level. The difficulty is to determine which wells are suitable. Experience in this direction, so far as it goes, is favourable. But there is very little to go upon. In the North of India it seems likely that tube wells with long strainers will yield supplies of from $\frac{1}{2}$ to 2 cubic feet per second, or say, 10,000 to 40,000 gallons per hour. In such cases there will be no difficulty about either motor or pump; it will be a simple matter of ordinary engineering. Elsewhere it is only in the alluvial deposits round the coasts that conditions will be found justifying the expectation of large yields within the range of a single pump. Invariably the supply will be derived from beds of sand which in some parts will be coarse enough to render it possible to dispense with tube wells and strainers; but nowhere are we likely to find the coarse beds of shingle or gravel which in America yield water in large volumes, with but a small depression in the water-level due to the draft of the pumps.

The lift irrigation problem in India is a complicated one; but on the technical or engineering side it may be studied under three main issues: the motor, the well, and the pump. The motor may be disposed of very briefly. Electrical distribution of power is possible where the well irrigation is concentrated, and it should be looked to as a possible field for the utilization of many hydro-electric schemes which now lack a market for the power which they can offer. In India (except in the immediate neighbourhood of the coal districts) we may rule the steam-engine out of court for irrigation work, as the cost of fuel is too high, and we must in the main look to internal combustion engines for the motive-power required. Terhe

are only two classes of these engines to be considered—oil engines using liquid fuel or in some cases the cheaper brands of kerosene oil, and gas engines supplied by charcoal suction gas plants. The main advantage—and its importance can hardly be over-estimated—of the suction gas producer plant is that the fuel used is of local origin, and any large development of demand for it can easily be met in a few years by the establishment of suitable fuel plantations. The oil-fields of India and Burma, not being under local control, cannot be reckoned on as more certain sources of fuel supply than more distant and foreign oil-fields. Where charcoal can be obtained, there can be no hesitation in recommending suction gas plants.

Above a certain minimum size they are perfectly suited to field work in India, but that minimum size is much too large for them to find employment in very large numbers in lifting water from wells. Some experimental engines of only 2 horse-power were made for me last year, and, under experienced supervision, they worked fairly well, but were not sufficiently reliable to be recommended for general use. Further work in this direction is clearly indicated, as it is only by a process of trial and error that the troubles experienced will be eliminated, and a motor produced which can be considered fool-proof.

The smallest size of oil engine manufactured to-day is of $1\frac{1}{2}$ horse-power, but I have no personal experience of the behaviour of any engine smaller than $2\frac{1}{2}$ horse-power. This size I have found to be a perfectly practical one, and it should be possible to employ them in very large numbers. Something smaller is, however, desirable, and a $\frac{1}{2}$ horse-power motor, if it could be designed to work with fair economy of fuel and without much trouble, would take the place of a pair of cattle, and in time would be employed in vast numbers. Such a motor would lift 1,500 gallons of water per hour from a depth of 30 feet, and its fuel consumption should not exceed 1 gallon of kerosene oil per day of nine to ten hours.

At the present time we may reckon that the lower limit of size for both oil and gas motors is 2 horse-power, and I doubt if we shall ever obtain anything of practical value of a smaller power. Generally it will be found that there will be no saving in capital outlay, and the increased efficiency of a larger motor working for a shorter time will fully compensate for the loss of return due to the plant standing idle. In some parts of the country, chiefly along the Coasts, in the Deccan, and on the high plateaux of South India, windmills might well be used. Hitherto they have never had a chance. The American type is too flimsy, and a modified deep-well pump is no use for irrigation. It should certainly be worth while to compare the universal wheel type of air motor now in use with various modifications of the Robinson anemometer which could be constructed. In India it must not be forgotten that in the hot, dry months, when water is most wanted, the wind velocities are usually highest. The results obtained with windmills in pre-war days require re-examination in the light of changed economic conditions. Everything is much more expensive, but the wind is still free, and it may be possible to make more use of this free agent than has hitherto been done.

To effect any great development of lift irrigation in India it is certain that great improvements must be effected, not only as regards motive power, but also in well sinking and the appliances in the wells for actually removing the water. As a preventative of famine during the last thirty years of the nineteenth century, well sinking was very actively encouraged by the State, and assistance was rendered in the shape of *taccavi* loans on a very liberal scale, but little or nothing was done to assist the ryot by way of technical advice, and it is almost certain that to-day the opinion of most Indian administrators would be that the ryot can do this work cheaper and better when left to himself than when he tries to work on lines he does not fully understand. If mere multiplication

of wells was the goal at which I think we ought to aim, then I myself subscribe to this opinion; but on a limited scale my experience and observations suggest that something more than this is required, and that, just as for the last twenty-three years I have advocated Government assistance in the application of modern methods of generating power to the problem of lifting water, so now I am sure that extremely valuable results will accrue if we definitely, and on a scale commensurate with the magnitude of the interests involved, set up the requisite machinery to assist in getting at the deeper supplies of underground water, which are beyond the reach of the ordinary cultivator. In saying this I have by no means overlooked the work that is now being done by the Departments of Industries and of Agriculture, and I should like to quote the following passage from the "Review of Agricultural Operation in India, 1921-1922":

"In spite of the inauguration of splendid systems of canals by the Irrigation Department over large tracts of the country, crop production is subject to the vagaries of a variable rainfall, and the prime need of agricultural development is for an increase in the control of the water-supply. No single activity of the Agricultural Department is, therefore, more appreciated in the districts than that of the engineering branches, which are at present mainly engaged in developing and increasing the supply from wells by subartesian bores and by the use of power pumping plants. The capacity for thousands of existing wells has already been increased, and an equally large number of new wells has been dug or sunk without having recourse to propaganda. The provision of an adequate and properly trained staff is the only requirement for the expansion of this useful work."

These remarks apply to the North of India. The evidence from the South is not quite so satisfactory. In a letter to the *Madras Mail* in December, 1922, the then Acting-Director of Industries wrote :

"The Department of Industries is at the present moment very much interested in oil engines . . . and

has a regular organization probably more efficient now than it has ever been, scattered about the country to assist owners in running these installations. Development is not going on so fast as we could wish, but the slow progress is due to the high prices of machinery of all kinds, and the almost prohibitive price of fuel oil, which is the result of the War."

Undoubtedly the War seriously hampered and for a time stopped these operations, but we have now had five years of peace, and though pre-war conditions have not been re-established, there has been ample time to reconsider the situation and effect such changes in methods and organization as are necessary to make progress under the altered circumstances. The higher prices for agricultural produce may be partly set off against the enhanced cost of machinery, and the difficulty of getting liquid fuel is in most places easily met by substituting charcoal and using suction gas plants and gas engines instead of oil engines. But the provision of motive power does not completely solve the problem. Much, I think, can be done to improve the ways and means of lifting water. It is rather a technical question, and in bringing forward a new idea, I wish to do no more than furnish an illustration of my main contention. It is less than eighteen months since I first saw what is now put on the market as the Boulton Water Elevator. It is a French invention which is now being developed by Messrs. Boulton and Paul, of Norwich. I was fortunate enough to see it just at the time when I was looking for something to raise about 10,000 gallons a day from the new well which had been sunk to a depth of 120 feet at the Indian Institute of Science, Bangalore, and for another lift to raise perhaps ten times that quantity from a new well 55 feet deep which had just been sunk for the sandalwood-oil factory at Mysore. The tests which I made at Norwich showed that I could obtain a working efficiency of over 70 per cent., and the results obtained in subsequent practical work have fully substantiated this conclusion. Years ago I got some

weavers to make me a Turkish bath-towel about 100 feet long and 6 inches wide. This was suspended from a pulley so that the bath-towel formed a loop dipping into the water. Causing the pulley to rotate brought up a wet bath-towel which was squeezed partially dry by a jockey roller on the main pulley. In this way a continuous flow of water was obtained, and the idea might have been developed. It was capillary attraction which enabled the cotton threads of the bath-towel to hold the water, and in the Boulton Elevator the same principle is more definitely employed. The elevator consists of a band which may be of metal or leather (preferably balata belting), which carries riveted to it at regular intervals a band of metal bent so as to form a continuous series of triangular metallic cells (*vide* Fig. 1), with their apices alternately pointing towards and away from the belt. The cells are usually made from a metal band $1\frac{1}{4}$ inches wide, folded so as to allow the cells a depth of 1 inch on the face of the supporting belt. The cells in section resemble dovetails. Belts with smaller cells can be and are made. The belt hangs in the well from the driving pulley and is kept taut by a loaded jockey pulley suspended as shown in Fig. 2. Running at the most efficient speed, which was about 7 feet per second, a small band raised 300 gallons per hour, whilst a larger one of the dimensions given above raised 900 gallons per hour. The lift was over 150 feet, and the efficiency of the plant in the case of the smaller belt was 55 per cent., and in the case of the larger 72 per cent. That is to say, of the power given out by the motor these percentages were actually found stored in the water lifted. I think I can safely say that these results have never been surpassed when dealing with such small quantities of water. By fixing a number of the cellular bands in parallel on a supporting belt (*vide* Fig. 2) any required multiple of these discharges can be obtained, with also some increase in the over-all efficiency of the elevator. Fluctuations in the level of the water in the well cause no inconvenience in running the elevator, but as

the resistance due to friction of the belt in the water is somewhat greater than the load, the power required decreases as the water-level falls, and is least when the elevator is working on the maximum lift. The elevator, being of the band type, may be compared with the Persian wheel, the Norya, the chain pump, or the *chaîne hélice*, and other forms of that type. To all these it is undoubtedly superior, either by reason of its simplicity or greater mechanical efficiency. It will work on any vertical lift from a few feet to the practical limit for irrigation—say 250 feet. I mention these points because I want to bring to your notice the fact that new ideas are being brought to bear upon the designs of water lifts, and there is a *prima facie* case for very detailed and careful inquiry into their merits. Ten years ago it was clearly proved that oil engines and centrifugal pumps reduced the cost of lifting water to about one-quarter the cost of doing the work by cattle, but the lower limit for such a result was roughly 10,000 gallons per hour, no matter what the lift might be. This Boulton Elevator reduces the limit to 900 gallons per hour, and on a lift of 250 feet it would require but a 2-horse-power motor to drive it. A pair of cattle such as with the ordinary *mhôt* now lift 12,000 gallons a day from a depth of 25 feet would with a double cell elevator lift 1,800 gallons per hour from a depth of 55 feet—that is to say, the elevator doubles the depth from which water may be lifted by cattle-power (*vide* Fig. 3).

The provision of a water lift which can be worked with any usual form of motive power with a much greater efficiency than has hitherto been obtained proportionately increases the depth to which wells may be sunk and increases the prospect of improved supplies. It is therefore necessary to teach the ryot how to sink deep wells and to provide plant which may be readily available for so doing. Hitherto the cost of baling water whilst sinking a deep well has always been one of the main, if not always the main, items in the cost of the work, and it needs but

little knowledge of these matters to see how conveniently the Boulton Elevator can be adapted to such work. Standard methods require to be worked out and standard plant provided. Obviously this is a function of Provincial Departments. The ryot should no longer be left to the mercies of the *wudders*, but provided with advice, and where necessary with assistance in carrying out either the deepening of the old wells or sinking of new ones.

Lifting water is by no means a simple operation, owing to the wide range of conditions which have to be dealt with. The belt form of lift or elevator is suited to every variety of well except tube wells, and it is capable of handling supplies of water much too small to be efficiently lifted by centrifugal pumps. Its extreme simplicity and freedom from all risk of breakdown is greatly in its favour. It is now possible to standardize water-lifting plant, and to introduce mass methods of production in its manufacture if only a sufficient demand exists. In India this demand ought to be created, but India is not the only country that requires water-lifting machinery of small output. Throughout the arid and semi-arid regions of the world there is a potential demand which the means to satisfy will bring into existence. It may therefore confidently be anticipated that the cost of plant for lifting water for irrigation from wells will in the future be greatly reduced. As an example of what can be done in 1924, I have an estimate for an elevator to lift 4,000 gallons per hour from a depth of 60 feet, or 6,000 gallons per hour from a depth of 40 feet. It is driven by a $2\frac{1}{2}$ horsepower oil engine, and a complete outfit ready for erection in India would cost Rs. 1,640 (*vide* Fig. 4). It would consume about 4 gallons of oil per day of twelve hours, and the total daily running expenses would be about Rs. 4, including interest on the capital and an adequate allowance for depreciation and repairs. Engines of this size can be obtained which will run quite well with liquid fuel, which would materially reduce the cost. The develop-

ment of mechanical engineering in India is the most crying industrial need of the country. The cultivator seems to have reached the limit of productive capacity without further assistance, and it is urgently necessary that improved appliances, the result of progress in science and engineering, should be placed at his disposal. This has been recognized by some for a long time past, and as the result of their labours we are now in a position to supply what is needed, and are confident that if the arrangements to do so are adequate to the undertaking, the result will be an immense addition to the wealth of the people.

To sum up the facts, I have brought forward (1) that during the last twenty years there has been no appreciable increase in the area under well irrigation, though the area under State works has increased by 9,000,000 acres, or nearly 50 per cent. This is partly due to wells being displaced by canals, particularly in the Punjab; partly to the cessation of the stimulus to digging wells caused by the frequent famines of the last century; but in the main it is due to indigenous methods having reached their ultimate capacity; (2) that during this same period the scope of lift irrigation, particularly from wells, has expanded greatly owing to the experimental work done with oil engines and pumps; (3) that at the present time progress along these new lines is insignificant and that the interests involved justify the adoption of special measures to bring about a much greater utilization of the underground water of India.

STATISTICS OF WELL IRRIGATION

The area of the Indian Empire is 1,773,168 square miles, or 1,134,000,000 acres, of which 1,097,901 square miles, or 704,000,000 acres, are under direct British administration. The remainder, almost exactly two-fifths of the whole area, comprises the territory of the Native States.

The returns published by the Government of India relate

to a total area which varies slightly from year to year, and which in 1920-21 was 621,226,065 acres. In that year crops were grown on 212 million acres, of which area nearly 49 million acres were under irrigation. The water-supply was derived as follows :

Government canals	...	...	20,078,267 acres.
Private canals	...	...	2,564,858 "
Tanks	...	...	7,236,471 "
Wells	...	...	14,241,898 "
Other sources	...	...	4,835,322 "
Total	...	...	48,956,816 "

More than one crop was grown on 3,562,256 acres of irrigated land, so that in 1920-21 the total area of irrigated crop was 52,519,072 acres.

The following table has been compiled to show the area irrigated from wells in British India from 1897-98 onwards :

Year.	Area in Acres.	Year.	Area in Acres.
1896-97	12,343,965	1909-10	11,881,135
1897-98	11,328,323	1910-11	10,213,753
1898-99	11,101,515	1911-12	10,408,424
1899-00	12,287,218	1912-13	12,350,801
1900-01	9,344,609	1913-14	13,866,918
1901-02	11,375,212	1914-15	12,556,291
1902-03	11,568,586	1915-16	12,550,423
1903-04	10,753,699	1916-17	12,032,966
1904-05	9,489,545	1917-18	11,138,760
1905-06	11,728,787	1918-19	14,215,703
1906-07	10,949,100	1919-20	12,691,863
1907-08	14,160,443	1920-21	14,241,893
1908-09	12,495,993	1921-22	12,128,995

NOTE.—The area from which the returns were received in 1896-97 was 537 million acres. By the inclusion of Zemindari tracts chiefly in 1906-08 the area increased to 623 million and since then it has varied between 619 and 625 million acres.

In the Report of the Indian Irrigation Commission (1901-03) it is stated that the area under irrigation by wells in a year of normal rainfall may be estimated as follows :

Province.				Area in Thousands of Acres.	
Punjab	3,750
Bombay	650
Sind	41
Madras	1,821
Central Provinces	77
Bengal	661
United Provinces	5,731
Upper Burmah	4
Ajmer Merwara	106
Berar	56
Total				...	12,897

In the Native States of India in 1900-01 it was estimated that the area under well irrigation was 2,556,000 acres and that in a normal year it would be about 3 million acres. The normal area, therefore, at the date of the Report for the whole of India was estimated at 16 million acres.



FIG. 1.



FIG. 2.

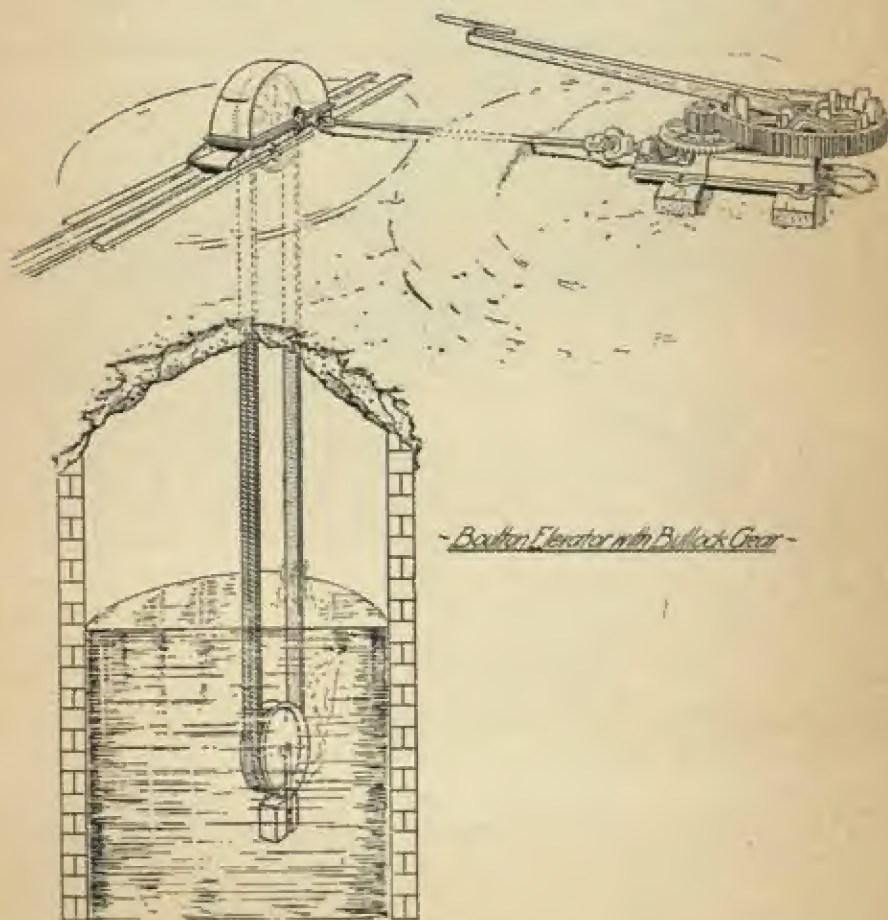


FIG. 3.

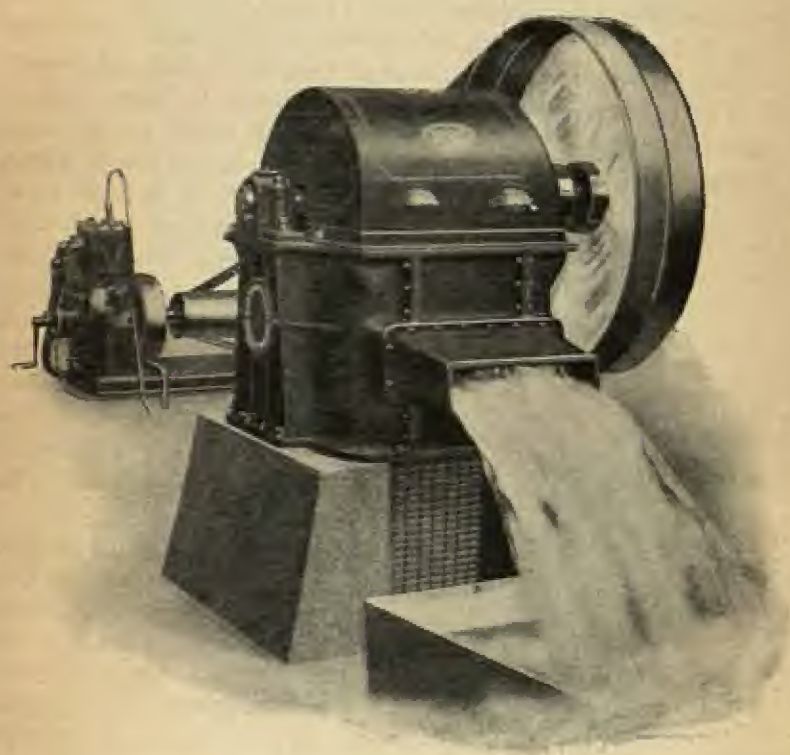


FIG. 4.

DISCUSSION ON THE FOREGOING PAPER

A MEETING of the Association was held at Caxton Hall, Westminster, S.W., on Monday, March 17, 1924, when a paper was read by Sir Alfred Chatterton, C.I.E., F.C.G.I., on "The Utilization of Underground Water in India."

The Right Hon. Lord Pentland, G.C.S.I., G.C.I.E., was in the chair; the following ladies and gentlemen, among others, were present: The Right Hon. Lord Lamington, G.C.M.G., G.C.I.E., General Sir Edmund Barrow, G.C.B., G.C.S.I., Sir Ali Imam, K.C.S.I., Sir Krishna G. Gupta, K.C.S.I., Sir John G. Cumming, K.C.I.E., C.S.I., Sir Patrick Fagan, K.C.I.E., C.S.I., Sir William Ovens Clark, Sir Herbert Holmwood, Sir Joseph Henry Stone, C.I.E., Mr. F. W. Woods, C.I.E., Lieut.-Colonel W. B. Lane, C.I.E., Rai Bahadur O. Kandaswami Chetty, Miss F. R. Scatcherd, Mr. F. J. P. Richter, Colonel Swaine, Professor and Mrs. Bickerton, Mrs. Drury, Mr. F. C. Channing, Mr. K. S. Rao, Mr. A. F. Salmon, Mr. H. D. Rice, Mr. A. Sabonadiere, Mr. C. P. Caspersz, Colonel Battye, Mr. Arnold Lupton, Mr. A. V. Pai, Mr. F. S. Tabor, Major G. W. Gilbertson, Mr. H. R. H. Wilkinson, Mr. R. Ryves, Mr. E. A. Molony, O.B.E., Mr. K. Tressler, Mr. G. M. Ryan, Colonel and Mrs. A. S. Roberts, Miss Partridge, Professor N. Gangulee, Mrs. W. G. Martley, Mr. F. Chatterton, Rev. H. Halliwell, Mr. J. S. Dhunjibhoy, Miss Collis, Maulvi A. R. Nayyar, and Mr. Stanley P. Rice, Hon. Secretary.

The CHAIRMAN: Ladies and Gentlemen, it is my privilege and pleasure to-day to introduce to you Sir Alfred Chatterton, whose paper we look forward to with very great pleasure. Those of us who come from South India (Madras, Mysore, and many other parts), know the very continuous and deep interest which Sir Alfred Chatterton has taken in this particular subject. It is characteristic of his great service to India in industrial directions. The more we know of his work, the more those who are friends of India will be grateful to him for what he has done. (Applause.)

The paper was then read.

The CHAIRMAN: Ladies and Gentlemen, it is not necessary, I am sure, with an audience such as the present to emphasize the great importance nowadays of the economic and industrial development of India. It would be an immense service to India if a larger portion of the knowledge, capacity, and public opinion of that country could be directed into such channels. ("Hear, hear.") There is a great deal which could be done in that direction, whether in the great mills of Calcutta, Bombay, Madras, and the other big cities, or in the branch of the subject which has been dealt with by Sir Alfred Chatterton in his paper this afternoon—namely, agriculture—which is the greatest industry of India, employing by far the largest proportion of its inhabitants. The difference between the people

of India and the people at home frequently strikes those who go to India ; it has always been to me a great deal more striking to notice the points of similarity between the people here and the people of India. I think it was Bret Harte who said there is a great deal of human nature in men everywhere. Especially is this true of the farmers. In this country it has often been pointed out how slow agricultural opinion is to adopt improvements, and how loath it is without some proof of their wisdom to subscribe to the teachings of agricultural colleges and such institutions. It is exactly the same in India. The ryot, as we all know, is very slow to think that the accumulated experience of centuries in the cultivation of his land should be put aside, and for a very good reason—that his livelihood depends on it. I sympathize very heartily with the ryot in that view. At the same time, as Sir Alfred Chatterton so forcibly put it in his paper, the fruits of science and research should, as far as we can do it, be placed fully at the disposal of the ryot and the whole agricultural industry in India. That to my mind is the key to the absorbing interest of this paper which we have had read to us to-day. The whole thing is summed up in this. I have had the benefit of being able to read this paper before I heard it, and it is so full of information and interest that I strongly advise you all to read it. You cannot fully appreciate its importance without reading it, but the facts are put forward so clearly that it is very easy to grasp it when you have it before you. The foundation of it is, as I understand, that the geological conditions of underground water in India are fairly well ascertained, so that we know what we are working for and endeavouring to get. The next point, and it is a very important point, is that the limits, as Sir Alfred Chatterton points out, of what can be done by the ryot with his existing facilities have been reached, and therefore if, as he further points out, the development of this well cultivation has been for some years at a standstill, it is for the welfare of India and prosperity of India that the Government should come to the rescue of the ryot and enable him to employ increased facilities in regard to water, and not only to increase the supply of water, but to increase his control over the supply of water. It is not sufficient that the water should be there. It is of great importance that the water should not only be there, but that it should be there when it is wanted to facilitate cultivation, and to overcome the difficulties of the climate, with which we are all familiar ; so that again let me express our gratitude to Sir Alfred Chatterton for putting this matter before us, and I venture to hope that the Government of India will be acquainted with his request that a further and fuller inquiry should be made when convenient into the subject in the interest of the welfare of the people of India. It seems to me it is an endeavour to contribute to the welfare and progress of India, and typical of the work that should be done for our fellow subjects in India to co-operate and push forward commerce and industry for the general welfare and so spread enlightenment and civilization. (Applause.)

Mr. F. W. Woods said that Sir Alfred Chatterton had published a pamphlet on the subject of underground water nearly twenty-five years ago, and he was glad to find him still going strong with his old subject.

He was inclined to agree with some of the Lecturer's contentions, but thought it would be more useful on the present occasion to dwell on points on which he thought differently. The Lecturer had quoted statistics of gross area, cultivated area, and irrigated area for the whole of British India; and had inferred from them that during the first twenty years of the current century there had been practically no increase either in the number of irrigating wells, or of the total area irrigated from wells. But he had not stated figures for the number of wells, whilst his statistics of area showed that the average area irrigated annually from wells during the five years ending with 1920-21 was 14 per cent. greater than the same data for the five years ending with 1900-01. It was a mistake to include, in this connection, statistics of gross and cultivated areas in provinces like Bengal and Assam, where there is no well-irrigation, no need for it, and no prospect of it in the future. It would have been better, also, if the Lecturer had differentiated between the conditions of the United Provinces and the Punjab, and those of other provinces; seeing that 75 per cent. of the area already irrigated from wells throughout British India lay in the former provinces, which therefore offer, presumably, less scope for future enterprise in irrigation from wells. Seventy per cent. of the area cultivated annually in the United Provinces and 50 per cent. of that of the Punjab was cultivated and watered without artificial irrigation and by rainfall only. Rainfall was an asset in the production of cheap agricultural produce which should not be ignored as a rival to projects for the extension of enterprise in artificial irrigation. The Lecturer had calculated that the normal area irrigated annually from wells throughout British India amounted to 16 million acres, and that this required the lifting of water in quantity equivalent to 64,000 cusecs flowing continuously for six months; which, again, meant the employment of nearly 3 million pairs of draught cattle; and he declared that a limit was imposed on the further extension of well-irrigation by cattle power, by the fact that the land could not support more cattle. There was, however, a flaw in this calculation. The 16 million acres, on which the calculation was based, were the irrigation of twelve months, not six; and their irrigation, therefore, was represented by 32,000 cusecs flowing for 12 months—not 64,000 for six months. Rectifying this error would lead to the conclusion that only $1\frac{1}{2}$ million pairs (not 3 million pairs) of cattle were engaged in that irrigation. And since British India possesses already 43 million bullocks and 11 million bulls and male buffaloes, the opinion that well-irrigation enterprise was restricted for want of cattle and fodder could not be sustained.

In Mr. Wood's opinion the underground water-supply was far more likely to fail than the cattle-supply. From an agricultural point of view there were some drawbacks to the benefits of irrigation from wells worked by power plant. Well water contains no fertilizer. Hence manure has to be arranged for separately, and, if not supplied by cattle, must be bought.

Cattle maintained for the purpose of lifting water from wells can also be used for ploughing, cartage, etc.; but oil engines and pumps cannot be utilized in those ways. Mr. Woods thought that the Lecturer was incorrect in stating that, in the Punjab, land formerly irrigated from wells had since

been brought under operation of canals. Perennial canals in the Punjab were not, as a rule, laid out in tracts where the spring level was near enough to the ground surface to be conveniently lifted from wells for irrigation. There had undoubtedly been a great increase in the number of wells in the Punjab Canal colonies, which had formerly been deserts devoid of wells. In the Thal, or tract of 5,000 square miles lying between the Indus and the Chenab and Jhelum Rivers, there had been an increase since the year 1900 of about 50 per cent. in the number of irrigating wells, though the increase in the *area irrigated* annually by those wells amounted to only 20 per cent. There had, however, been an increase of 900 per cent. in the area cultivated on rainfall alone in that same tract, whose annual rainfall averaged only $9\frac{1}{2}$ inches. The Lecturer had mentioned that the Irrigation Commission of 1901 had observed that the extension of well-irrigation had been greatest where perpetual exemption had been granted from enhancement of assessment on the increased value of land due to construction of wells; and Mr. Woods was inclined to agree that the Indian Land Revenue system, with its 50 per cent. income tax and periodical revisions, tended to penalize agricultural enterprise, and to discourage the maintenance of fallows.

The Lecturer had referred to the Hydro-Electric Installation at Amritsar for the purpose of irrigating with water pumped up from wells; and Mr. Woods remarked that this scheme had passed through his hands originally. He had pointed out that the level of the subsoil water in any locality depended upon a certain balance between percolation-inflow and percolation-outflow, and that if this reservoir were drawn upon by pump-irrigation with power plant, the subsoil water-level would fall; and that it would be very difficult to limit the extent of such fall. On the basis of such calculation as was possible, Mr. Woods had advised that not more than one pump well should be set up in each square mile of land, and that not more than one cusec should be drawn from each well for irrigation within that area. That was in the year 1910. But the scheme, as actually carried out some years later, provided for fifteen wells within an area of five square miles only; and water was pumped from each well at the rate of two cusecs. That meant a year's discharge of thirty cusecs from the subsoil of five square miles; or six times the quantity recommended by Mr. Woods as prudent. The Lecturer had mentioned that the yield of the wells had in practice been automatically reduced from two cusecs each to one and one-eighth cusecs each, owing to clogging of the filters of the steel tubes with salt and fine sand: so that it appeared that Nature had been compelled to assert herself to some extent, in resistance to the overdraught on her subsoil resources. This was a good illustration of one aspect of the difficulties of the problem of well-irrigation on a large scale. A zamindar in possession of an engine-pumped well would be even more apt than the Amritsar officials to err in the direction of overstraining his resources. Working with cattle draught, a zamindar obtains water scantily, slowly, laboriously; and is obliged to use what he gets, economically. But if he has simply to "press a button," so to speak, in order to obtain an abundant supply, he is likely to neglect economy in utilization. Thus,

the Lecturer had showed that at Amritsar the area irrigated by a two-cusec well was only 250 acres annually. Assuming that the well was worked for twelve hours daily, the amount of water pumped from it would suffice to cover the whole of its irrigated area to a depth of 3 feet; whereas in the case of a well worked by cattle draught, not more than half that quantity of water would be laid on. The Punjab Government had done much in the way of investigating the possibility of extending the use of engine-pumped wells for agricultural purposes; and it had probably become aware of various difficulties in the path of the problem. There had been several failures, already incurred, that suggested caution in extending such enterprise on a large scale. Mr. Woods repeated that the subsoil water-supply was far more likely to fail than the supply of cattle for working wells. The Lecturer had stated that the subsoil water at Amritsar had been lowered by 4 feet by the hydro-electric pumping that had been carried on there. And, as that installation was not completed till the year 1915, or later, that meant the sinking of the subsoil water at an average rate of rather more than half a foot annually. In twenty years a drop of 10 feet might be expected; in fifty years a drop of 25 feet; and so on. For unless the draught on the wells was carefully restricted and regulated, who could say at what level the sinkage would cease? Fortunately Nature had applied a partial safeguard by clogging the filter tubes of the Amritsar wells. The "millions of little patches of green cultivation scattered over India" at the sites of irrigating wells, as described by the Lecturer, create merely dimples on the surface of the subsoil water tables; but if methods of "mass production" were adopted, for the pumping of water on a vast scale by means of oil engines and pumps, the effect on the subsoil reservoir might be injurious. The Lecturer thought that under existing conditions of irrigation from wells there was a considerable *preventable* loss of water by seepage from water channels. Mr. Woods was of opinion, however, that this was not true of Punjab well-watercourses. It was not uncommon to find a small boy sitting near the outlet of a well, pounding up dry clods of stiff clay into powder and sprinkling the latter into the current of the water channel, which carried it on and gradually deposited it as a waterproof lining on the soffit of the channel. Elsewhere cultivators even went to the trouble of lining their well-watercourses with clay plaster, so as to prevent waste by percolation, and divided up their fields into compartments no larger than 30 feet by 15 feet in order to encourage irrigation. Yet these same Punjabi cultivators, when they receive water more abundantly and easily, from a canal, pay far less attention to economy of utilization; and they would be similarly careless if they received relatively abundant supplies from a well by power pumping.

Mr. Woods remarked that the Lecturer had not explained why the *mhôt*, or leather-bucket lift, was used in the United Provinces and Madras, but not in the Punjab, where the Persian wheel only was used. In the United Provinces the well-cylinder is founded upon a *mota*, or stratum of clay, beneath which a crater forms, which holds a considerable bulk of stagnant water. The *mhôt*, having a capacity of several cubic feet, draws water in single bucketfuls, at intervals of several minutes. The Punjab

well, however, has no *mota*, but is supported only by the friction between the soil and the well-cylinder. The use of a *mhôt* would disturb the sand round the well-curb, and cause the well ultimately to fail. This risk is obviated by the use of the Persian wheel, which draws water continuously at a small steady rate of flow, in scores of tiny earthen pots bound on to an "endless chain."

The Boulton Water Elevator, described by the Lecturer, was designed on the Persian wheel principle, a fact which rendered it likely to be very well adapted to Punjab requirements. Mr. Woods thought it was a very ingenious mechanism, and likely to find a ready market in the Punjab and Sind; not so much for use on wells sunk specially for it in land hitherto uncultivated, as for use on the existing zamindari wells of masonry (of which there were some hundreds of thousands in the Punjab alone), in displacement of the crudely constructed Persian wheels at present in use. But the draught on such wells would have to be carefully restricted, as they would probably not be able to yield more than, say, half a cusec, without risk of instability.

LORD LAMINGTON said he fully agreed with the remarks which had been made by the Chairman. He had referred to the reluctance of the ryot in India and of the farmer in Great Britain to adopt improved agricultural appliances, but many farmers had tried them in this country and had burned their fingers in so doing, so that, having regard to the fact that throughout centuries the ryot had been fairly successful, it was not unnatural that he should be disinclined to adopt new methods. It must not be forgotten that, if they did away with oxen, it would not be all gain, because they would lose the manure, the chief supply of fuel for the household. An improvement represents only a balance of benefit against a disadvantage.

SIR PATRICK FAGAN congratulated the lecturer on his extremely interesting paper. With regard to the Punjab, during the last twenty or twenty-five years there had been a distinct development in the number of wells, there being there at the present time about 300,000. Mr. Woods had referred to the effect of the Land Revenue system upon the development of improvements in agriculture, and had suggested that it discouraged them, especially the construction of wells. This was not the case in the Punjab, where agricultural improvements and especially irrigation wells were exempted from extra land revenue assessment, the exemptions lasting for a period which was calculated to be sufficient to pay the improver the capital expended with appropriate interest. In other parts of India such improvements were entirely exempt from extra taxation; for instance, in Madras. The increase of wells would have been greater had there been more efficient means available for their operation. If the cultivator were assured of a larger yield of water and that the necessary repairs could be effected without much trouble he thought there would be a considerable demand for the contrivance which had been described by the Lecturer in lieu of the Persian wheel at present in use. He agreed with Mr. Woods that the entire abandonment of bullock power would not be an advantage having regard to the agricultural and economic conditions of the Punjab

and of India generally, but it was obvious that some apparatus of the kind described by the Lecturer had very considerable potentialities for agricultural improvement in India.

Mr. ARNOLD LUPTON said that when he was in India in 1915 he visited Amritsar, and in that neighbourhood, owing to leakage from an irrigation canal, the hydraulic level was so much raised that there were swamps, and consequently a good deal of malaria. The problem was how to reduce the level of the water by pumping, because the pumps were liable to be clogged by sand drawn in by the water. This problem was solved by the invention by Major John Ashford, mechanical engineer, of a tube strainer which admitted the water while keeping out the sand. The centrifugal pumps were driven by electric current obtained from the fall of water in the canal. With regard to the suggestion that the Indian cultivator was conservative, an agricultural professor in the Madras Presidency had told him that when he desired to secure the adoption of an improvement he got one or two of the more enterprising ryots to test it, and then gradually it became adopted by the others. The question of irrigation was of excessive importance in India. The amount of cereal crops raised was about enough to feed the people, leaving the cattle out of consideration, so that when grain food was given to the cattle—and the cattle required such food—the food which was necessary for the people's healthy existence was taken from them, with the result that a large proportion of the people of India were underfed, so that they easily became victims to malaria, influenza, and other ailments. In those parts of India such as Eastern Bengal, where the crops were always good, the people were stronger and better able to resist disease. The good crops in Eastern Bengal were due to the annual flooding of the province by the Ganges and the Brahmaputra. In those parts of Bengal where the high and strong embankments prevented this annual flooding, the fertility of the soil was not maintained, the people were underfed, and malaria increased in virulence.

Professor BICKERTON said when he first went to Christchurch, New Zealand, the conditions with regard to the subterranean water were such that an artesian well could be sunk for £5, but gradually the water-level fell owing to the amount of tapping, until, instead of rising 4 or 5 feet above the surface, they had to dig a hole in order to get the water out, and finally had to pump it.

The LECTURER, in reply to the criticisms on his paper, said that he shared the opinions expressed by Lords Pentland and Lamington as to the necessity for complete local knowledge before any machinery or plant could be recommended for general use in India. He had learnt much in the thirty years he had studied water-lifting, and since the establishment of the Indian Agricultural Department a large amount of useful knowledge had been gathered regarding empirical practice. He thought a good deal of the lack of progress in India in the last twenty or thirty years was due to uninformed enthusiasm with regard to experiments which were totally unsuitable to the requirements of the country. When he first went to India there was at Madura a farmers' club, started by the Collector, with a nice

clubhouse and a large building full of modern agricultural machinery which had never been used, though a good deal of money had been spent in obtaining it. The ryots of the district laughed at it; the pleaders in the Courts had found it a convenient meeting-place. He had suggested to them to set up a sugar mill driven by an oil engine, and they purchased the plant, but they insisted on having it outside the clubhouse, which was twelve miles from the nearest sugar-cane field. These people were pleaders, but the methods of the ryots were founded on very long experience. If they wanted to teach the Indian ryot anything they would have to get up rather early in the morning. Mr. Woods had taken a kindly interest in the paper by criticizing the data of the Punjab. He would not argue the matter, but the remarks of the Chief Engineer of the Punjab were evidence of the necessity of an inquiry, and they permitted him from a personal standpoint to enter a plea for greater facilities for obtaining statistical information either from the India Office or from the High Commissioner. With regard to the model machine which he had shown to them, in his opinion, after much experimental work, it was suited to the conditions and prolonged use under which the ryot worked. There had been dozens of water lifts invented during the last thirty years and all had failed because of some not always easily discovered defect. In his experience the model machine was exceptional and could be applied generally to the conditions that obtained in India. The smallest size with a single line of cells would lift 300 gallons an hour and the larger size 900 gallons an hour. By additional lines of cells, belts could be made up which would yield any required discharge. It was suitable for the wells in the Punjab, where the sand had a tendency to flow into the wells. With regard to the cattle power, no doubt cattle were plentiful, but cattle could not be used to work water lifts under the ordinary conditions prevailing in village herds, but needed feeding up, and the limit had been reached to which the ryot could supply his cattle with food. A ryot had a certain area of land with a certain number of cattle upon it; he grew various crops, some of which were used to supply food for his cattle. If he had to buy food from a neighbour or from a distance the cost of keeping the cattle would become outrageous. In his opinion the question required more detailed inquiry. This did not apply to every part of India, but it was an important economic truth which he desired to bring out as fully as possible. There was no doubt that well-irrigation had ceased to expand. It was desirable that there should be expansion, and the only way to ensure it was to provide mechanical means for doing the work hitherto done by cattle. He did not suggest that the ryot had been working on wrong lines; with his primitive appliances the ryot was producing a result which could not be improved on, but they could bring to his help things of which he and his forefathers had never heard, thus providing him with a method of doing his work by efficient means. This would render possible a higher standard of living in the rural districts. At the present time the number of cattle maintained for agricultural operations, including drawing water, was larger per acre than in other countries. If the number of cattle could be reduced by employing mechanical

appliances in place of the cattle, it would be unnecessary to grow such a large amount of cattle food, thus enabling the ryots to grow crops better fitted for human food. If machinery could be provided to do a certain amount of the work which was now done by cattle there would be great improvements in the general condition of the country.

On the motion of Sir ALI IMAM a hearty vote of thanks was by acclamation accorded to the Chairman and the Lecturer.

The CHAIRMAN having thanked the meeting on behalf of the Lecturer and himself, the proceedings terminated.

A CURIOUS LAW OF INHERITANCE

BY M. M. PERIS

THE Aliya Santana of Canara or the Marumakkatayam of Malabar is a system of inheritance which is peculiar to certain parts of Western India, and under which succession to the family property is traced in the female line. Literally the terms mean "sister's son lineage"; and the law itself is a survival of the polyandrous habits which prevailed in ancient India, and the traces of which are still to be found in those provinces where the curious rule of inheritance referred to is still practised, in spite of the check administered by the Brahminical influence in the earlier stages of its introduction. It has also resisted the influence of Western civilization, which, wherever it has spread, has stood for natural as well as rational forms of social and religious customs. As a result of the polyandrous habits which prevailed in early times, the immigrant military classes found it easier to contract alliances with the women of the families owning or cultivating the soil at the time, whom they protected from aggression in return. Aliya Santana may have arisen from the private compacts which such matrimonial alliances naturally led to. Though under this rule of inheritance family property actually descends from mother to daughter, it is usually described as a system under which property descends from maternal uncle to the nephew or sister's son, from the fact that titles and dignities are inherited by males, who also now ordinarily exercise management.

The persistence of the custom, whatever may have been its origin, is no doubt due to the fact that it tends to

prevent the division of landed property, and enormous vested interests have consequently arisen which it is exceedingly difficult to touch. Indeed, the main characteristics that mark off the Aliya Santana from the ordinary Hindu law are three: (1) Kinship in the family is traced in the female line; (2) the institution of marriage is ignored; (3) family property is indivisible. The existence of constant feuds among a primitive people of polyandrous habits seems to have led to landed property being vested in the females of the family. Such members of it as remained at home to look after the land were denied opportunities of acquiring special rights of ownership to the disadvantage of the absent military classes. It is not known how far in ancient times the women actually managed the family property, but they do so to some extent even now.

Under the Aliya Santana law children of the male issue count for nothing, and belong to the family of their mother, thus constituting a separate family altogether. Marriage among the Aliya Santana castes is a matter of no consequence, and is practically supposed to amount to a legalized concubinage. It does not confer any rights to property of the parents upon the issue, and no legal consequences flow from the relationship of husband and wife. The Madras Act of 1896 has modified to a certain extent the relations existing between husband and wife, but it only applies to persons registering their marriages under the act.

The vesting of landed property in women and the consequent greater equality of the sexes in conjugal relations have been commonly regarded as an immoral system when contrasted with the ordinary Hindu customs; and the married state of the castes following the Aliya Santana rule of inheritance has even been branded by English courts of law as nothing better than concubinage, but when the

habits of married people among the higher and more respectable Tulu classes of Canara, for instance, are inquired into, the system is found to be little open to such a taunt. Unfaithfulness, clandestine or otherwise, while the marriage tie exists, is said to be much less among the followers of the Aliya Santana than among castes whose claims to morality are much higher; and it may safely be asserted that the women of the Aliya Santana castes who seek a second husband by means of a divorce are much fewer in number than the men of other castes who take to themselves more than one wife.

The common idea of the comparative immorality of the Tulu marriage customs seems, therefore, either to be based on a misapprehension of facts, or to depend upon the assumption that the morality of a people is inseparably bound up with a conventional code, which strives to preserve the chastity of one sex by the severest penalties, while allowing the other utmost latitude in the formation of either legalized or illicit connections. Amongst the lower and poorer Aliya Santana classes the marriage ties and obligations may be of a loose description, but not one whit more so than amongst South Indian castes of the east coast in which property is vested in men and descends from father to son. Neither have shaken themselves free from habits dating from old polyandrous days, and it is doubtful if the Sudra castes of the east coast can be said to be on the right track in endeavouring to combat them by the modern Brahminical expedients of infant marriage and perpetual widowhood.

Though evolved as a natural result of the endeavours made by a primitive people to work out their own form of civilization before Brahmin influences were brought to bear upon them, tradition ascribes the origin of the law to the arbitrary fiat of a despot who wished to offer one of his

sons as a sacrifice to the gods, but was thwarted by the maternal affection of his wife, and had to fall back upon a nephew surrendered to him for the purpose by his more pious but less human sister, in acknowledgment of which he decreed that all sons should hereafter forfeit their birth-right in favour of sisters' sons. The name of the despot is said to have been Bhutal Pandya, to whom different dates are assigned from the earliest ages up to about A.D. 1250, when there reigned at Barkur, in South Canara, a prince with the suffix Pandya to his name, who seems to have been particularly obnoxious to the Brahmins. As the custom has successfully withstood all Brahmin and Muhammadan influences among the Canara people who have adopted Hinduism or Muhammadanism, it is obvious that it must have been firmly rooted before the Brahmins began to be powerful, about the eighth century of the Christian era.

Bhutal Pandya has also been described as a prince of the Pandyan family of Madura, South India, who took advantage of a civil war to invade South Canara. While the local tradition ascribes the introduction of Aliya Santana to Bhutal Pandya, it assigns him a much earlier date—*i.e.*, A.D. 77; so that Bhutal Pandya of tradition appears to have been a mythical personage, representing the struggle of Brahminism against the supporters of the early demon worship of the country. Sir Charles Turner, the Chief Justice of the Madras High Court, seems to hold the view that the law was introduced at the later stage of the history of South Canara referred to above. Others, including the late Mr. Justice Muthuswamy Iyer, considers it as a survival of a social custom which was probably organized at a time when relationship was derived from the mother, and when a child did not know his father and the father his child, and at all events when paternity was regarded as uncertain.

The traditional account of the origin of the law is found in a Canarese pamphlet known as "Bhotal Pandya's Code," in which the author ascribes it to the year A.D. 77, and relates in detail the fiat that led to its introduction. Deva Pandya, the ruler of Tuluva, was about to launch his new ships laden with valuable cargo, when Kundodhara, King of Demons, appeared to him and demanded a human sacrifice. Deva Pandya wished to appease the king of the demons and requested his wife to hand over one of his sons for the purpose. She refused. His sister Satyavati then came forward and volunteered to offer her son, Jaya Pandya, to be sacrificed. Kundodhara discovered signs of true greatness in the child, and, waving the sacrifice, allowed the ships to sail. He then took Jaya Pandya under his protection, restored to him his father's kingdom, and changed his name to Bhotal Pandya. Soon after Deva Pandya's ships returned laden with rich merchandise Kundodhara again appeared and demanded a human sacrifice. The King consulted his Queen, who again declined to hand over her son, and even publicly renounced her and her son's title to the riches brought by the ships. Kundodhara now asked the King to disinherit his sons in favour of his sister's sons. Bhotal Pandya, who inherited his kingdom from his maternal uncle, ruled that his subjects should follow his own example, thus introducing the Aliya Santana law in the year A.D. 77, or on the Third Megha Suddha of the year 1 of the era of Shalivahara, called Ishwara.

It is true that Bhotal Pandya ruled Tuluva (the modern South Canara), but it was about A.D. 1250 and not about A.D. 77, as would appear from the above account.

Whether the matriarchal theory of Bhotal Pandya's version explains fully the origin of the Aliya Santana law or not, it is probable that the system represents the

survival of a social organization, which was arrested at a very early stage of its history. The theory that the civilized Brahmins were not able to exert their influence on its development is borne out by the fact that Canara was governed for three or four centuries—*i.e.*, from the twelfth to the sixteenth century A.D.—by Jain Kings, who were distinctly hostile to Brahminism and did their best to thwart its progress. The Muhammadan rule had very little effect on the customs of the people, and these were left undisturbed till the advent of the British rule at the beginning of the nineteenth century. The wise policy of the British Government in allowing the people to follow their own usages, not only preserved these peculiar customs, but even retarded their progress in respect of two matters: marriage and partition according to a more developed system of law. Under the existing law, though division of property is in fact forbidden, temporary arrangements for separate management are often made for convenience, which by lapse of time become practically permanent divisions in many cases.

Of the Tulu-speaking Aliya Santana races of South Canara, Jains (with the exception of the priestly classes) and Bants form, as it were, the landed aristocracy of the district, and own between them the greater portion of its cultivated land. Jains are, by the way, fast disappearing, their estates being in many cases alienated to the State for want of legal heirs. The Bants are a fine stalwart race with a sturdy independence of manner, and the comparatively fair complexions common to the west coast. They have not, as a rule, largely availed themselves of European education, and as is so often the case amongst high-spirited people of primitive modes of thought, party feeling runs high, and jealousy and disputes about landed possessions often lead to hasty acts of violence, which in

their turn lead to protracted litigation in both civil and criminal courts, saddling the property with heavy encumbrances. Nairs and Thiyas of Malabar, who roughly correspond to the Bants and Billavas of South Canara, follow their own form of an extraordinary law of inheritance referred to in an earlier part of this essay. Moplas, too, in certain parts of the coast, follow the same rule. They are, in short, the descendants of the early Arab settlers who had married women of the local land-owning classes, and adopted the prevailing rule of inheritance in deference to their foreign wives. They, with the later converts to Islamism, form now a single community, and are popularly known as Moplas. They form nearly a tenth of the total population of South Canara, and are not less numerous in Malabar.

FINANCE SECTION

THE INDIAN CURRENCY POLICY

BY SIR JAMES WILSON, K.C.S.I.

ON January 31, 1924, the quotations were as follows : In London : price of gold, 96·67 shillings per fine ounce ; price of silver per ounce 925 fine, 33·31 pence ; rate of exchange of the rupee, 17·17 pence. In New York : the pound sterling, 4·306 dollars ; price of fine silver, 63·25 cents per ounce. In Calcutta : On January 30, gold was quoted at 25·9 rupees per tola of 180 grains, and fine silver at 80·9 rupees per 100 tolas. These quotations give the following values :

VALUE OF THE RUPEE MEASURED IN GOLD AND SILVER

	In 1913.	January 31, 1920.	January 31, 1922.	January 31, 1923.	January 31, 1924.
Value of the pound sterling in grains of gold	113	82	99·5	108·1	99·3
Value of the pound sterling as a percentage of the sovereign	100	72	88·1	95·7	87·9
Value of the sovereign (113 grains of gold) in rupees :					
In London	15	11·9	17·5	15·2	15·9
In India	15	17·0	17·9	16·7*	16·3
Value of the rupee in grains of gold :					
In London	7·53	9·6	6·5	7·4	7·1
In India	7·53	6·7	6·3	6·8*	6·9
Value of the rupee in pence sterling in London	16	28	15·6	16·5	17·2
Value of the rupee in pence measured in gold in London	16	20	13·7	15·8	15·1
Value of the rupee in grains of silver :					
In London	253	149	197	233	229
In India	257	157	194	217*	222
Ratio of gold to silver :					
In New York	34	15·5	31·3	31·9	32·7
In London	34	15·7	30·5	31·4	32·2
In India	34	23·5	30·8	32·1*	32·0

* January 10, 1923.

During the twelve months ending with January last the gold value of the British paper pound sterling fell seriously—from about 96 per cent. of the gold in a sovereign (113 grains) to 88 per cent. of that value. This fall was no doubt largely owing to the delay in the settlement of Europe, to the unfounded rumour that the late Government intended to reverse its announced policy of gradual deflation, to doubts as to what would be the policy and action of the new Government (which have not been entirely removed by the Premier's recent declaration that they intend to adhere to the recommendations of the Cunliffe Committee), and perhaps most of all to the fact that no further reduction has been made in the total of the currency notes outstanding, which on January 30 was 278 million pounds, or almost exactly the same as it was twelve months before. These considerations have evidently led the financiers of the world (including bankers, merchants, and investors) to doubt the will or the ability of the British Government to restore at an early date a free market in gold in London and to bring back the value of the pound sterling to that of a sovereign for international purposes. The value of the rupee in sterling in London improved from 16·5 pence to 17·2 pence, but this improvement was much more than counterbalanced by the fall in the gold value of the pound sterling, and on January 31 last the value of the rupee in grains of gold in London was only 7·1, as compared with 7·4 twelve months before, and with 7·53—the pre-war value. (It has since further fallen to 6·9 grains of gold on March 4.) It is difficult to account for this fall in the gold value of the rupee. It is not due to a balance of trade against India, because that balance is now considerably in India's favour. It can hardly be due to the state of India's finances, as the budget recently presented promises a good surplus, after making provision for considerable payment of debt. It is probably mainly due to the increase which has taken place in the supply of rupee currency (including

rupee notes). According to the Indian Currency Return for February 22, the value of the notes in circulation was 1,861 million rupees, as compared with 661 million on March 31, 1914, and as compared with 1,742 million on December 31, 1922. During the last twelve months, therefore, the value of the notes in circulation has been increased by about 120 million rupees, and this must have tended to a depreciation in the value of the rupee, whether measured in gold or in commodities. There has been no considerable new coinage of rupees during the twelve months, but during the three years ending with March 31, 1919, the net coinage amounted to no less than 1,034 million rupee coins, making a gross addition to the silver currency, since the beginning of the century, of over 2,600 million coins, and it may be estimated that there are at present in existence about 4,000 million rupee coins. The addition to the quantity of rupees and notes since 1914 has been approximately: rupee coins, 1,034 million; notes to the value of 1,200 million; total increase, 2,234 million rupees. (It must always be remembered that, besides the rupees and notes in circulation, there must be an immense quantity of rupee coins in hoards, which might at any time come into circulation at the will of the holders.)

The Secretary of State on February 2, 1920, announced that he would aim at giving the rupee a fixed value in exchange of 1 rupee for 11·3 grains of fine gold—that is, one-tenth of the gold in a sovereign, instead of the pre-war ratio of one-fifteenth of a sovereign, at which rate the rupee was worth 7·53 grains of fine gold. In accordance with that policy, a law was passed making the sovereign legal tender in India for 10 rupees in place of 15; but as, at the present price of gold in India, anyone can get in the bazaar over 16 rupees for a sovereign, no one is likely to tender a sovereign for 10 rupees. As things have turned out, the rupee is worth only 6·9 grains of fine gold, as compared with the 7·53 it was worth before the war, and with the 11·3 grains aimed at by the Secretary of State in 1920.

It is of the utmost importance to the people of India that the gold value of the rupee should be stabilized, so that prices in India and bargains made in terms of the rupee shall not be subject to the uncertainty of fluctuations in its value. It is of little use to stabilize it in terms of sterling, which itself fluctuates greatly in gold value. It is true that Government transactions between India and England are seriously affected by changes in the value of the rupee in sterling, and that the trade between India and England is largely based upon that value; but England is not the only country that India deals with, and rupee prices in India vary not so much according to changes in the sterling rate of exchange as upon changes in the gold value of the rupee. The object should therefore be to stabilize the rupee at some fixed value in gold. It is now obvious that it will be impossible to bring up the gold value of the rupee to anything like the 11·3 grains of fine gold aimed at by the Secretary of State in 1920, and difficult enough to bring it up to the pre-war value of 7·53 grains and keep it at that value.

In a speech made at Bombay to the Associated Chambers of Commerce Sir Basil Blackett, the Indian Finance Minister, said that the goal towards which everyone is working is a gold standard, but that before attempting to stabilize exchange the Government must be sure of resources necessary to make the attempt successful. In a letter written in January last by the Secretary of the Indian Finance Department, it is said that the Government of India are definitely opposed, in the existing uncertainty of world prices, to any immediate attempt to fix the future gold value of the currency, owing mainly to a firm belief that violent fluctuations in the general level of commodity prices, with the social and economic disturbances which they involve, are more prejudicial to the interests of India than a certain instability of exchange. The letter also says, "It will scarcely be denied that a considerable further depreciation of gold in terms of commodities is a

possibility which cannot yet safely be left out of account. If in such circumstances the rupee were tied to gold, the course of commodity prices in India would have to conform in the long run to that of the United States. This is the automatic footing on which exchange and currency would have been placed, and the Government of India prefer not to condemn this country in advance to following all the possible vagaries of a price level controlled by the currency policy of a Government entirely beyond their influence." To this last argument it may be replied that the price of commodities in gold in India does not depend upon the gold price of commodities in the United States alone, but in the relation between the value of gold and the value of commodities all the world over. It may be true that the gold price of commodities in the United States may be to a certain extent affected by the currency policy of the Government of that country; but the United States is not the only country with which India trades, and from which it can obtain gold or commodities. It is true that the value of gold in commodities all the world over is subject to variation, but gold is still the ultimate basis of international exchange and is certain to remain so for many years to come. It is the most stable basis it is possible to obtain, and certainly a much more stable basis than the present rapidly varying value, whether measured in gold or in commodities, of the British paper pound.

In the interests of stability of prices in India and of justice between man and man, the Government of India should lose no time in cancelling the futile announcement of February, 1920, and in announcing that it will aim at giving the rupee a fixed value in exchange of 1 rupee for 7·53 grains of fine gold—or one-fifteenth of a sovereign. The Act which made the sovereign legal tender in India at the ratio of 10 rupees to one sovereign should be amended so as to make the ratio 15 rupees to the sovereign, as it was before the war. This would prevent the rupee from rising in value over the rate of one-fifteenth of a sovereign. The

difficulty will really be to bring the gold value of the rupee up to that ratio and to keep it there. The first step taken with that object should be to make a gradual reduction in the quantity of currency notes in circulation, with a corresponding reduction in the Indian Government securities now held in the Indian Paper Currency Reserve, which are little more than so much paper. Such a reduction would cause no serious hardship to anyone, as there are plenty of rupee coins in circulation, in hoards, and in the reserve to meet all possible needs of the people for legal tender currency—besides sovereigns, which would come again into circulation as soon as the rupee had been stabilized at 7·53 grains of gold.

COMMERCIAL SECTION

A NOTE ON THE PRESENT ECONOMIC CONDITION OF INDIA—II

BY SIR RAJENDRA NATH MOOKERJEE, K.C.I.E.

TRADE AND INDUSTRY

INDIA'S international trade during the last three years gives a sufficiently accurate index of the commercial conditions prevailing in the country. The following table gives the trade in terms of value, and should be read in conjunction with the world price levels prevailing at the period, in lacs of rupees (1 lac = 100,000):

	April 1 to March 31.		
	1920-21.	1921-22.	1922-23.
Exports of merchandise	25,805	24,544	31,401
Imports of merchandise	33,560	26,634	23,250
Balance of trade	- 7,755	- 2,090	+ 8,151
Gold	888	279	- 4,109
Silver and currency	- 759	- 1,495	- 1,893
Council bills	—	—	- 375
Reverse Councils	2,853	—	—
Transfer of securities and interest ...	- 79	126	227
Net visible balance of trade ...	- 4,850	- 3,180	+ 2,001

The direction of Indian trade may be classified thus :

TOTAL EXPORTS (Rs. 2,988,500,000)

1. Food, drink, and tobacco	Rs. 694,219,783
2. Raw materials and produce mainly un- manufactured	1,565,122,737
3. Articles wholly or mainly manufactured	704,627,982
4. Living animals	2,328,544
5. Postal articles	22,168,697
	<hr/> 2,988,467,743

Share of United Kingdom	...	46.02	or	15½	per cent.
Share of rest of British Empire	...	45.23	"	15	"
Share of Japan	...	38.09	"	12½	"
Share of U.S.A.	...	24.90	"	8½	"
Share of Germany	...	16.28	"	5½	"
Share of China	...	11.07	"	4	"

TOTAL IMPORTS (Rs. 2,326,000,000)

1. Food, drink, and tobacco	...	Rs. 309,894,045
2. Raw materials and produce mainly un-manufactured	...	184,659,387
3. Articles wholly or mainly manufactured	...	1,794,040,545
4. Living animals	...	2,582,633
5. Postal articles	...	34,728,325
		<hr/> 2,325,904,935

Share of United Kingdom	...	140.00	or	60	per cent.
Share of rest of British Empire	...	16.18	"	7	"
Share of Japan	...	14.47	"	6	"
Share of U.S.A.	...	13.22	"	5½	"
Share of Java	...	12.89	"	5½	"
Share of Germany	...	11.90	"	5	"

A detailed study of the trade figures for the last decade yields significant results. The credit position of India in the world markets is being slowly rebuilt, and on a scale wider and firmer than was the case in pre-war years. The figures for imported manufactures are not an accurate index of the relative strength of the movement towards industrialization, for India had much leeway to make up because of the deficiency in machinery imports and the excessive wear and tear on her plant during the war years. Though it is undoubtedly true that food and raw materials still occupy an excessively predominant position in her exports, it may be noted with satisfaction that much is being done to develop the industries for which India offers both good raw materials and an ample market for the manufactured article.

The Indian Sugar Committee of 1921 dealt exhaustively with the sugar position. India has, on the average, about 2½ million acres under sugar-cane cultivation (about half the world's acreage), yet her imports of sugar during the

three years (1920-21, 1921-22, 1922-23) were 343,691, 782,668, 504,090 tons, costing Rs. 18½ crores, 27½ crores, and 15½ crores respectively. India has the largest cane-growing area in the world, yet her production per acre is the lowest, being only 1·07 tons to the acre, against 1·96 tons in Cuba, 4·12 tons in Java, and 4·61 tons in Hawaii. The chief impediments to the growth of a sugar-refining industry—an industry which one would reasonably expect India to develop first in view of the continuous and large demand of her people for refined sugar—are the poor quality of the crop, the partition of the land into numberless small holdings, the heavy capital expenditure needed for putting up a modern sugar plant, and the very keen competition from Java, which supplied 83 per cent. of her imports last year. Although no action on the report of the Sugar Committee has yet been taken, the value of their broad and comprehensive recommendations should be recognized. They include the organization of the sugar industry on the Java model—a system of State subsidies for research institutes, demonstration farms, and technical schools, all directed and inspired by a Sugar Board.

The importance of India's position in the produce and export of oil seeds has already been indicated. The imports of vegetable oils from abroad are not large, but the prospects of an oil-pressing industry are quite good, the present methods being crude—viz., in mills worked by bullocks or in hand presses. Well-equipped crushing plants on modern lines are on the increase. The large production of oil seeds in India forms a useful surplus for export purposes.

The raw products for metallurgical industries have not been extensively surveyed. India's annual production of coal is only about 19 million tons as against Great Britain's 234 million tons (1922). Her production of pig iron is limited to two works whose combined output does not reach a quarter of a million tons—a mere fraction of the

total imports of iron and steel into India. The steel industry is still in its infancy. Practically all the manganese ore raised in India is exported. There are sufficient deposits of lead, zinc, and copper to form a basis for large smelting works. Large fields still remain unexplored and even unsurveyed, waiting for capital and enterprise. A survey of the water-power of the country has yielded promises of a great future, particularly for the development of forest industries and the exploitation of minerals.

With the completion of several big cement works in 1922 and 1923 India's production of this commodity exceeds her consumption. Suitable materials for successful paper-making and glass industries are available in large quantities, and in spite of very active and keen competition in these lines, India should be able to develop an extensive manufacture.

The expansion of manufacturing industries since 1914 has been on a phenomenal scale. The facts about the cotton mills of Bombay and the jute and tea industries in Bengal are too well known to need any recapitulation. During and immediately after the war the profits reaped by established industrial concerns were enormous, and the traditionally shy Indian capital was poured out in millions in support of prospective industrial schemes—good, bad, and indifferent. It is well to admit that a very large number of these "war-industrials" were ill-considered schemes, and unwarranted by adequate investigation. The dismal tale of liquidations in 1922 and in the current year provides a lesson and a warning for the future. The continuous series of labour strikes, primarily due to the increased cost of living, were fostered by agitation, and tended to discourage fresh industrial expansion.

Despite many adverse factors, however, the rapid advance in India's industrial position cannot be questioned. The new Factories and Mines Act and Workmen's Compensation Act indicate the general desire to safeguard the interests of the workpeople, but it is doubtful whether

some of their provisions are not rather premature. India is not Europe.

India's industrial deficiency is still great. "The list of industries," says the Industrial Commission Report, "which, though their products are essential alike in peace and war, are lacking in this country is lengthy and almost ominous." The emphasis on the need for filling in the "blanks in our industrial catalogue" was well timed, and the Indian Government and people have become fully awake to the necessity for developing and maintaining the basic industries in the interests of national security and well-being.

The inquiry of the Indian Fiscal Commission, following on the detailed investigations of the Industrial Commission, has completed the theoretic basis needed for an intensive effort to industrialize India. The Government has accepted the majority recommendations in favour of a "policy of protection to be applied with discrimination" both in the selection of the industries and the degree of protection to be afforded to them. A Tariff Board has been set up, and the first industry to be reviewed is the iron and steel group. How far the recommendations of the Board will affect British industry it is difficult to say with precision. But if Britain commands the Indian market by virtue of the quality of her wares (as is, indeed, largely true) she need not be afraid. India, for years to come, will want all sorts of things from abroad, and the initiative, resource, and enterprise which have built up British trade in the East will find fresh means to continue in the enjoyment of that predominance which follows quality and merit.

British financiers and capitalists have been inclined to look with suspicion on the development of political consciousness in India. A shrewd judge of human nature would have predicted a recurring series of acrimonious controversies during the period of transition, and would have counselled a calm attitude. The passions of the moment often raise polemics to dangerous heights, and

even serious-minded and calm thinkers are led to envisage troubles and crises which may bear no relation whatever to actual facts. I do not wish to minimize the far-reaching effects of the Reform movement in India, but nevertheless it appears that British opinion is being sedulously encouraged to look upon the inevitable transitional difficulties in India as the beginning of the "end of British rule in India." Nothing can be further from the truth. Like all untrained democracies, India is committing mistakes. But she is learning rapidly. It is unfortunate that interested and short-sighted persons, making the most of the errors committed, stir up racial hostility and becloud the facts with a smoke-screen of prejudiced opinion and hasty judgment. India needed British guidance in the past and is grateful for it. Her long tutelage is maturing into independent action, but she will still need kindly guidance, and she looks to Britain for it.

Cheap capital, expert direction, and scientific research are the *sine qua non* of industrial progress. Britain is in the most favourable position to supply them. She has credit; she possesses the necessary technical and scientific knowledge; and she has an acknowledged reputation for steady progress. India has learnt to trust her, and is willing to be guided by her. She has imbibed deeply of British traditions; she has learnt of science, of history, of politics, of freedom at Britain's feet, and she desires no better teacher for guidance in her economic progress. Britain has given of her best to India in the past. The present is more difficult, and needs careful guidance. If Britain continues to send of her very best to India, the economic progress of the two countries is assured.

HISTORICAL SECTION

THE EMBASSY OF SIR WILLIAM NORRIS, BART., TO AURANGZEBE

BY HARIHAR DAS, B.LITT. (OXON), F.R.HIST.S.

CHAPTER II (*Continued*)

THE first thing to be done was to acquaint the Great Mogul with the formation of the new "English Company trading to the East Indies," and request such settlements for their factories, immunities, and privileges as might be necessary for the security and protection of the agents of the Company and the redress of their grievances. Such privileges should be at least equal to those enjoyed by other Europeans. The new Company, it should be made quite clear, was distinct from the old one, had no concern in its affairs, and was not liable for its debts. As to the Company's interests, Sir William would follow the advice of the Directors at home. Further, Sir William was to inform the Mogul of the King's efforts to suppress piracy, he having sent a squadron of ships for the purpose. Captain Kidd had been entrusted with a Commission to attack the pirates, but had himself become one of them; hence urgent instructions had been given to the King's fleet to capture him either in the East or the West Indies, should he sail thither. All goods he had taken from the Indian princes would be restored to them on his capture. Sir William was to give an account of his progress from time to time, as opportunity might offer, particularly recording the "Customes manners Policies and Interest" of the Great Mogul and other princes for the King's information; and on the conclusion of his business was to return in a man-of-war as early as possible. We quote His Majesty's instructions to his Ambassador in full:

"Instructions for our Trusty and Well-beloved Sr William Norris Bart whom Wee haue appointed o^r Ambassador to the great Mogull & other Princes in India. Given at our Court at Kensington the 31th day of December 1698. In the tenth year of our Raigne.

"WILLIAM R.

"Upon the Receipt of these our Instructions and your other dispatches, you shall forthwith Embarq with your Retinue on such of our Shipps as are designed for suppressing the Pyrates in India. Wee having given directions that they doe carry you to some Port of the greate Mogulls Dominions as may be most convenient for you.

"Being arrived there you shall repair with all Convenient Expedition to the Court of the great Mogul, & having informed yourselfe of the manner to be observed in making your addresses to the Mogul and his Principal Ministers, you shall accordingly desire audiencies and present our Credentiaall Letters, taking care on all Occasions to preserve the honor and dignity of your Character.

"When you are admitted to make your application to the Mogull or his Ministers after having made them such Complements in our name as you shall think proper, you shall acquaint them with the Establishment of the generall Society & English Company tradeing to the East Indies in pursuance of the late Act of Parliament, you shall represent the mutuall advantages that may hereby arise to our respective subjects and to procure them Redress in their Just Complaints & Grievances, and you shall particularly endeavour to obtain such settlements of Factories, Capitulations, Imunities and Priviledges for our Subjects of the said Generall Society & Company as may be necessary for their Security and protection in the carrying on and management of their Trade and Commerce. And if you find that any Priviledges Imunities or advantages are granted in the Moguls Dominions to any other European Nations, which are not enjoyed by the English, you shall endeavour and Insist that His Ma^{ties} Subjects may be allowed the same.

"You shall on all proper occasions make it knowne that as the new Comp^a have noe Interest or concerne in the Estate or Affairs of the old Company soe they are not lyable to answer for any of their Debtes.

"In all matters relating to Trade and the Affaires of the Company, you shall comply with and observe such further Rules and directions as you shall from time to time receive from the Directors of the said Comp^a.

"You shall acquaint the Mogul & his Ministers with the

greate care, Wee have taken to suppress the Pyrates in the East Indies tracing to this End having [*sic*] sent a Squadron of our Shipp on purpose to those parts, and that such of the Pirates as haue been taken within our Dominions haue been brought to justice.

"You shall likewise acquaint them that Capt. Kidd Comander of a Shipp called the Adventure Galley having desired a Commission from Us to seize such Pyrates as he should meet with, Wee thought fitt to grant the same for the benefitt of our owne Subjects, and those of the Princes in Amity with Us, and for your better Information, Wee haue directed that a copy of the said Commission be herewith delivered to you But Wee were noe sooner informed that he himself had Committed severall Pyracies, but in detestation of soe greate a Villany and being desirous to doe all that lyes in Us to suppress him and his wicked Associates, Wee Comanded Our Shipp bound to the East Indies to make it their particular care & business to pursue the said Adventure Galley and to Seize the said Kidd and his Accomplices, and sent likewise Orders to the Comanders of our Shipp in the West Indies and to all the Governours of our Plantations there to Seize and Secure him and the rest of the Pyrates in case they come into those Parts, that soe such Robbers and Common Enemyes of all Nations may be punished with the utmost Severity And that We haue likewise Ordered that all such Goods as shall bee taken from the said Kidd or any other of the Pyrates belonging to any of the Subjects of the Mogull or other Princes in India shall bee forthwith restored to the right Owners.

"After you have dispatched and finished the matters and affaires for which this Embassy is chiefly Intended, Wee leave you at Liberty to return to England with our Men of Warr if they shall be then in India with the first convenient oppertunity.

"You shall Correspond and giue an Account of yo^r Proceedings as often as you can by the most safe Conveyances to Europe to one of our Principall Secretaries of State and at your return you shall present to Us or our said Secretary of State a Perticular Relation of the Customes manners Policies and Interest of the Court of the greate Mogul and other Princes in those partes as may be proper for our knowledge and Information and of what you can propose to Us for the Interest and Advantage of Trade.

W. R."

Sir William Norris was duly furnished with a letter of introduction to the Great Mogul from his "loving friend"

William III., the recital of whose titles was apparently intended at once to impress the Mogul with the King's importance: "King of England Scotland France and Ireland; the most Invincible and most mighty Defender of the Christian Faith against all kind of Idolatryes of all that live among the Christians and falsely profess the Name of the holy Jesus." The "most mighty and victorious and most renowned Emperour Aullem Gheir" was suitably complimented on his conquests and widely extended dominions, and also on the protection he and his predecessors had afforded the King's subjects who had sent out ships to trade in the several parts of the Indian Empire. King William had done the like for strangers trading in his own kingdoms; and as he desired to establish a perpetual friendship and beneficial commerce between his own people and those of the Mogul, he had thought it well to establish a new Company to trade with India and to send an ambassador, "a Person of greate meritt and highly favoured" by him, to negotiate such privileges and immunities as would encourage his subjects trading there, such as were already enjoyed, and such others as might be found necessary and convenient.

The King further assured the Mogul that in his desire to protect the commerce alike of his own and the Mogul's subjects from the ravages of the pirates, who had lately done much mischief in the Indian seas, he had sent a squadron of men-of-war to pursue and destroy them. The following is the letter of His Majesty to the Great Mogul by his Ambassador, Sir William Norris:

"William the Third, by the grace of Almighty God Creator of Heauen and Earth, King of England Scotland France and Ireland; the most Invincible and most mighty Defender of the Christian Faith against all kind of Idolatryes of all that liue among the Christians and falsely profess the Name of the Holy Jesus.

"To the most mighty and victorious and most renowned Emperour Aullem Gheir Conqueror of many Kingdoms King and Sovereigne Lord over all India and many other greate Territories and Dominions, and the most high

exalted Prince in ample Honour and Dignity; sends kind Salutations with Wishes of Health and all true Happiness.

"Most Mighty and Noble Prince.

"There is nothing more to be desired by all Wise and just Princes then the Advantage and Prosperity of their respective Subjects and Dominions, and nothing conduceth more thereunto then the freedome of Commerce and Inter-course between different Nations and Countries; For which reason Wee have always been ready not onely to give all Assistance & Encouragement to our owne Subjects and People, but likewise Protection and a friendly Reception to all Straingers, who are willing to come and traffick within our Dominions. The like Wee understand has been done by yo^r Imperiall Majesty within your Territoryes and our Subjects have for many years under the Protection of your Ma^{tie} and your Royall Predecessors sent out Shipps, and exercised Trade and Commerce with your Subjects in the Severall Ports of your Empire.

"Now for the establishment of a Perpetuall Friendship and a Kinde Correspondence, and beneficiall Commerce between both Nations; Wee have thought fitt with the advice of our Nobles and gréat Men in Parliament assembled to establish a new Society and Company of our Subjects to Trade to your Dominions, which Wee are perswaded will very much redound to the mutuall benefitt and Wellfare of our Kingdomes & People.

"And that your Imperiall Ma^{tie} may bee made acquainted herewith Wee have resolved (according to the Custome observed amongst great Princes and Emperours) to send to your Imperiall Court, as our Ambassadour, Our trusty and well beloved S^r William Norris Barronett, one of our Councillors in Parliament, a Person of great Meritt, and highly favoured by Us, whom Wee desire Yo^r Ma^{tie} kindly to receive in that Quality, and to give entire Credit & beleife to what ever he shall represent to you in our Name; And that yo^r Ma^{tie} will afford him, your Favour and Countenance when he makes Application to you, or your Principall Ministers on behalf of our Subjects Tradeing in your Dominions, and that they may be Encouraged and Protected therein, Wee further desire Your Imperiall Ma^{tie} will grant & Confirm not onely all such Priviledges & Immunityes, which by vertue of antient Custome and Capitulation have hitherto been enjoyed by our Subjects tradeing to, & in your Dominions, but that you will grant them such other Additions of your Favour and Protection, as shall at any time be found necessary & convenient for them;

Wherein your Ma^{tie} will likewise doe, what will be very acceptable to Us.

"And that nothing may be wanting on our part to protect and Secure your People and Merchants, as well as our owne in their Navigation against those Pirates & Common Enemyes of all Nations, who wee hear have of late done much Mischeife in the Seas of India, Wee have sent a Squadron of our Shippes of Warr on purpose to pursue and destroy them, and to inflict such Punishment on those they shall take as such wicked and detestable Robbers doe Justly deserve. Wee having already caused such of them as have been found in any of our Dominions, to be put to death.

"Wee have Ordered our said Shippes of Warr to carry our Ambassador to your Dominions, and Wee have particularly commanded them to treat all yo^r Ma^{ties} Subjects and People they shall meet with at Sea, with all the Regard and Kindness, that becomes good and loving Friends. And if in any thing Wee can render Yo^r Imperiall Ma^{tie} further marks of our Love and friendship, Wee shall readily doe it, since it hath pleased Almighty God to Invest Us with Greate Power and Authority, and to make our Name glorious among all the Kings and Princes our Neighbours. And soe we Conclude with repeating our Wishes of Health Peace and true Happiness to Yo^r Royall Ma^{tie} Given at our Pallace at Kensington the First day of January, in the Tenth year of our Raigne.

"Yo^r Loving Friend

"WILLIAM R."

In order to provide against any delay that might result from the Ambassador's death while on his journey, a similar but rather shorter letter was given to his brother Edward Norris, to be delivered to the Mogul if necessary. Both letters were dated January 1, 1698-99 :

"His Maj^{ties} Letter to the Great Mogul by Edw^d Norris Esq. to be delivered by him in case of the Ambassad^r Death.

"William the third by the grace of Almighty God Creator of Heaven and Earth King of England Scotland France and Ireland, the most Invincible and Most Mighty Defender of the Christian Faith against all kind of Idolitries of all that live among the Christians and falsely profess the Name of the Holy Jesus. To the most Mighty most victorious and most renowned Emperour Allum Gheir

Conquerour of many Kingdomes King and soveraigne Lord over all India and many other greate Territories and Dominions and the most high exalted Prince in ample Honour and Dignity sends kind Salutations with Wishes of health & all true happiness.

"Most Noble and mighty Prince.

"When Wee determined in our Royall Minde to send our trusty & wellbeloved S^r William Norris Bar^t as our Ambassador to your Imperiall Ma^{tie} for the establishing a mutuall love and friendshipp between Us and your Imperiall Ma^{tie} and for procuring the benefitt and Advantage of our respective Subjects and Dominions. Wee thought it convenient at the same time to appoint another fitt Person in whose prudence and good Abilites Wee could confide to goe along with him as Secretary of the Embassy, and to Succeed in the management of those Affaires, in case it should please Almighty God to take out of this World the said S^r William Norris before his Arrivall at yo^r Imperiall Court or during his stay there, and having for this purpose made choice of our Trusty and wellbeloved Edward Norris Esq^r one very well qualifed and esteemed by Us, Wee write this to yo^r Imperiall Ma^{tie} to acquaint you therewith and to desire you will kindly admitt the said Edward Norris into your Imperiall Presence. And that your Ma^{tie} and your Ministers will give Credit & beleif to what he shall represent to your Ma^{tie} or to them in our Name, and that you will cause your said Ministers to discourse and negotiate with him upon all matters & in the same manner as if the said S^r William Norris were living as may be necessary for the advantage of our said Subjects Tradeing within your Dominions & for the good and welfare of our severall People Countries and Territories according to what Wee have more at large expressed in our Royall Letter, which Wee ordered our said Ambassador S^r William Norris to deliver to your Imperiall Ma^{tie}. And which if it be not already done, Wee have Commanded the said Edward Norris to present to yo^r Imperiall Majesty, together with this our Second Letter both Signed with our Royall hand, and soe wee Wish your Imperiall Majesty all happiness and true felicity and Recomend you to the Protection of the Great Omnipotent God. Given at our Court at Kensington this First day of January 1698, In the Tenth Year of our Raigne.

"Your most loving Friend

"WILLIAM R."

(To be continued.)

"THE CHILDREN"

BY ARTHUR VINCENT

(*Continued*)

OF our two days' stay in Kohlu no chronicle is needed. The time passed uneventfully in the comfortable camp of the Agent, who as a host proved in his element; and the further ceremonial visits to and from the Marri Nawab inspired in me a far less vivid memory than our first striking meeting in the rugged pass of the Ormazhu. What time I sat at ease and read, smoked, gazed, or compiled a fairly useless diary, Rogers would be out at the work of his trade or arranging in guttural Baluchi the details of our forthcoming ride, and the Agent busy with the affairs of State. On the eve of our departure from the Agent and his hospitable camp we sent our own "camp" ahead. It was not a pretentious affair, consisting mainly of two field service 80-pounder tents, two brown canvas bags of X-pattern furniture, and a miscellaneous accompaniment of stores destined chiefly for our interiors. Four camels carried it all, and bore besides a load of grain for our horses and a heap of the camelmén's and escort's belongings.

Our itinerary was a simple one: one hundred and five miles to cover, only five days' march. On the first day twenty-six miles to Jeewani, then nineteen to Mamand, then about twenty apiece for three days to Bozher Kachh, Mirdad, and finally to Babar Kachh, where we should rejoin the Harnai railway. At the last three of these places we should find rest-houses; at Manjra, five miles short of Mamand, was another in case we might be weatherbound, and at all of them there would be water. This last consideration governs all travel off the beaten

track in Baluchistan, and much travel on it as well. Our "camp" was for such halts as we might have to make away from rest-houses.

If the journey before us were a brief one, it promised plenty of interest. My own sense of exhilaration lay in three chief facts—firstly, that the path was devoid even of a telegraph line, let alone a post office, no mean joy to a man habitually overshadowed with Babus and correspondence. Next, our route was historic in Baluch legend, of which more later, and it lay through some of the wildest and grandest of Baluch scenery. Lastly, it was comparatively untrodden ground; few white men pass along it in a decade, sometimes none. Rogers told me, furthermore, that parts of the Chakar Tangi, in our fourth day's ride, were reported as impassable to horses and camels, and that, if this proved true, he had orders to turn back. "But," he added, "I don't mean to." So there was some added flavour of adventure.

At daybreak on September 29, 1914, we rode forth, exchanging the kindly comfort of the Political Agent's camp for the delightful uncertainty of the unknown.

This time we were but a small cavalcade. With us two came some nine horsemen all told. Six were Military Works Sowars, two were Pathan syces on spare mounts, and last, but not least, rode Mir Ismail, our Baluchi guide for the day, his full white clothes brightened by a gorgeous long green-and-gold waistcoat. Rogers's arrangements included, by the way, a different Baluch guide for each day of the march, so that no one of them might be taken unduly far from his own home. In our train walked our six remaining camelmen, stalwart Baluchis, each leading a big Rind camel laden with kit, on the top of which were perched precariously our domestic staff with their invariable accompaniment of hurricane lamps and kerosene tins. Between us we carried something of a battery, more for sport and for *noblesse oblige* than for any foreseeable necessity. Rogers had a '303 cavalry carbine, myself a

'440 Winchester, the Sowars their aforesaid Martinis, whilst Mir Ismail bore the curved tulwar of his race and a short, heavy gun not unlike a small Tower musket. Our syces carried each their master's twelve-bore, ready to hand for instant battle if opportunity should arise of replenishing our larder. We certainly had a frontier air about us!

Having started us off, I may perhaps pause for a moment to describe Rogers, my companion in the wilderness and my host for a most enjoyable and all too short journey. Fair of complexion, of medium height, lithely built, but broad of shoulder, he concealed in a trim figure an unusual muscular strength. His clear-cut features and keen look lent him an air of perpetually scenting something, and I noticed that when silent he rode with his eyes ever fixed on the far distance. "Always looking a march ahead, from correct military habit," he told me laughingly. I never found anything that had the power to tire him, either in physical effort or in endurance, and his cheerfulness was as enduring as his physique. He was wont to beguile the long marches with lore and store of Baluch legends and with the practical side of his work, with a seasoning from his illimitable fund of anecdote. He spoke of his work with the greatest enthusiasm, revelled in his semi-independent and vagrant life, and desired for ever to tread fresh ground into the unknown. Here, at any rate, was one seemingly fitted to maintain the outposts of Empire.

A nos moutons. We fared forth from Kohlu before sunrise, in the delicious cool of an autumn morning, with a lilac sky topping the serrated edges of the eastern mountains. As we rode over the first ten miles of level shale and "put," towards an almost indistinguishable gap in the Jandran barrier, the day changed quickly to light and heat, and the dim blue of the peaks first to red ochre and then to the glaring yellow that is all Baluchistan. At 8.30 or so we reached the mouth of the Wanga Pass, to leave the Kohlu Valley for good. A last look back upon it produced a splendid panorama. The great Tikhel range which locks

the valley to the northward stood up in one unbroken mass of stone, east and west as far as the eye could see. Bright yellow in the early sunlight, with deep black patches of shadow westward of a peak here and there, its miles upon miles of jagged, tumbled rock stretched out without a single patch of other colour in relief. No forests softened its hard outline; no grassland blended in its unvarying shade of khaki. It was a wall of rock suggesting eternity. Almost due north of us there showed, ten miles away, the beginning of the broken cleft through which we had come to Kohlu two days before, the one familiar spot in a serried wilderness of virgin stone.

Turning southward through the Wanga Pass, a couple of miles between close, low hills brought us to a great drop, into the Bor Valley. The track nicked its way along seemingly interminable sidecuts, always descending sharply, whilst our ponies slithered over loose pebbles and little protruding ridges of rock. At the foot of the slope, or rather cliff, the drop in temperature was most marked. For us, the sun had almost set again over the high Mar hills near by to the eastward, and we had gone back into the coolness of the early morning. We must have dropped many hundreds of feet.

Then came many miles of more or less broken going, with one deep, cool tangi wherein the rock walls seemed almost to close in over our heads, then a ride along a westward valley, up over its land-locked end, down again on the far side of the kotal, and at twenty-four miles or so from the start we entered the Jeewani Valley. Two miles farther on there met our eyes one of those little oases of Baluchistan, a perennial stream, some trees, a square mud hut, and, gladdest sight of all, a field of thick green grass.

Our camp site, but no camp! Mir Ismail's high-pitched Baluchi call evoked from the hut a big black-bearded Marri Levy Sowar, and Rogers translated for me. "Yes, without doubt our camels had arrived yesterday, but they had this morning proceeded onward the fifteen miles to

Manjra, where the Sahibs would find a rest-house." The sowar gave the information in the tone of one who conveys unexpected good news, in the prospect of a roof.

It was a cheerful outlook! Noon was already past, the heat at Jeewani was intense, twenty-six arduous miles had we covered since dawn, and another fifteen on comparatively empty tummies in the heat of the afternoon were to be deplored. I looked glumly at Rogers. Rogers, however, was not glum at all, having added Western cheerfulness to acquired Eastern patience by years of experience. "Well," he said, "we must get on. Tents don't matter a straw to you and me when the weather's dry and we've got trees, grass, and water, but we've got to overtake the commissariat. They've evidently misunderstood my instructions once, they might do so again, and if we don't catch them at Manjra to-night they may push on still farther to-morrow." Horrible thought! So, halting first an hour to water and feed our horses, we pushed on for those weary fifteen miles, first telling the Levy Sowar to direct our remaining camels to follow us when they should arrive. The route grew rougher as we went, and the indifferent going in places, together with the length of our march, sometimes compelled us to dismount and lead our horses a mile at a time.

Close upon sundown we came upon the little mud rest-house of Manjra, near the left bank of the Manjra River, whose crossing and re-crossing had grown monotonous of late. The house is not ordinarily a palace: two rooms twelve odd feet square and two godowns outside them would not generally pass that test. Moreover, its furniture consisted of two "newar" charpoys, *et praterea nihil*. Nevertheless, to us it was palatial for the moment; and it was with a long-drawn sigh of relief that we dismounted, off-saddled, drank the last draught from our water-bottles, and lay on the charpoys with haversacks for pillows, to rest deeply for a space.

Our advance camels were already installed comfortably,

and I observed that Rogers apparently only questioned their drivers, forbearing from any measure of reproof. I asked if it was so, and why. I have always been impertinently curious. "When a Baluchi is by way of helping you," he answered, "and lets you down inadvertently, don't slate him, or you will hurt his feelings like those of a child. I don't want them to be disappointed. I shall just make instructions clearer still next time. Besides, the thing's done, and yapping wouldn't undo it." This may have been but philosophy; yet, pondering later in England, I began to see why the Baluchis we met one and all hailed Rogers in a fashion not accorded to everyone.

Later, as the evening grew dark and the stars peeped over the great stony hills to the east of us, our six remaining camels trailed patiently up to the rest-house, and sank bubbling on their knees to be unloaded. Forty-one miles had their camelmén marched afoot since dawn, and over rough ground for a good deal of the way. Yet they came in with that smooth Baluch shuffle which is seemingly tireless, and were in nowise put out, as were very much our servants from India who had sat atop whilst the Baluchis walked.

It had been a long day, but all mortal troubles have an ending. When at ten o'clock, after an excellent if simple dinner, I lit a cheroot to accompany Rogers's eternal briar, I reflected that this uncharted travelling affords a joy for which the neurotic, housebound, under-exercised denizens of the Western cities would give fortunes untold—that of going to bed healthily and physically tired, with the certain foreknowledge of sound sleep to come. And of all the crowning joys of real peace, give me the desert upland on a cool starry night, with a long day's travel behind one and an undisturbed night ahead, whilst the delicate scent of sovereign-wood mingles with the undefinable but unforgettable odour of the camp fires, and no sound breaks the silence save the grunt of a camel or the whinny of a horse.

That night I slept the sleep of the moderately just, which

is so good that surely the sleep of the just can be no better. Next morning, sipping hot tea lazily in bed at sunrise, seven or thereabouts, we decided that as only five miles separated us from our next halting-place, Mamand, we would defer our departure until after lunch, so as to rest the camelmén and beasts as long as possible. There was little need to rest the camels; forty-one miles is a "morning promenade" to a good Baluch camel, but we had the horses to think of.

Accordingly we spent a lazy morning. Rogers sat at an X-pattern table and wrote up his reports indefatigably from his entries in a thick notebook which lived in his right-hand pocket on horseback or afoot. Myself, seeking relaxation and the stretching of my muscles before yesterday's unwonted work should make them stiff, pottered down along the rocky bed of the Manjra with a shotgun, a Baluchi detailed by Rogers in attendance. My acquaintance with his language was, and is, suitably represented by a very round "O," but the way in which he shikarred for me was marvellous. Rogers had told him to show me birds, and he did: now with his gestures, now with a point, now with a guttural clucking or a warning "Hsh-h-h-h." He seemed to know where we would find game by instinct; never did I see a bird before he did. I returned with three very fat chikor—the brown rock-partridge of the country—two blue pigeons of a size I had never seen in India, and, as a curiosity for mounting, a sort of armadillo which tipped 48 inches from snout to tail. I proffered the Baluch a silver rupee, but he would have none of it. I was mystified until Rogers, seeing the play, said, "Don't force it on him; he's saying that he has only helped a friend of mine. It's their way." I felt myself wishing that there were a few Baluchis in my district, where the grasping proclivities of the Indian villagers made me sick. Rogers told me later that he always paid his Baluch guide of the day a rupee for twenty-four hours' hard work, and that even then they would protest that it was unnecessary.

Our march on this 30th of September was uninteresting, only five miles over "put" and rock, though the pristine grandeur of the rough landscape continued to impress me. The only incident worth recording happened before we started, and that I beg leave to relate.

During the process of loading, one of our big camels broke the cord which fastens on to a wood button at one side of its nose, upped, and distributed its baggage over a fair area as it capered away in its new freedom. Arrived down in the bend of the Manjra, it proceeded to graze, leisurely but warily. Sanger's circus was let loose forthwith. Rogers seized a loading-rope, converted it into a kind of lasso, mounted his waiting pony, and rode off in pursuit. I followed suit, less the lasso, as did the escort, and together with the dismounted camelmen, we chased the unfortunate beast up and down the river-bed. Incidentally, the camelmen did so barefooted, over camelthorn, cactus, and jagged rock which would have ripped a London shoe-sole to ribbons. Finally it was one of them who roped the runaway, despite our cavalry efforts!

Thus far, honours rested with the camelmen; now came the turn of the escort. The defaulting camel had by now become thoroughly infuriated by the chase and recapture, and as once more it was forced to its knees in front of the rest-house it looked dangerous. Its bubbling roars of rage swelled to fortissimo, and with that look of vicious idiocy which stamps uniquely an angry camel, it swayed its head from side to side, making furious snaps at everything within reach. I recollected a saying of Rogers that just such a camel had once bitten the top of a man's head clean off.

Out of pandemonium rose Zaman Shah, a trooper of the Military Works Sowars. Short, wiry, and muscular, his dark, broad features and ringletted curls showed the Kharan Baluch but thinly disguised in the khaki of his calling. Standing in front of the beast, just out of reach, he bode his chance, and then, with a spring so quick that I could

not quite see what he did, he threw his arms over the camel's head, and seized its hideous nose with . . . his teeth! There he hung precariously and fiddled with the nose-cord with his hands. Two or three times the camel swayed parlously, roaring the while, but Zaman's splendid teeth were deep in and closed like a vice. After perhaps five seconds—literal, not journalistic ones—the beast was beaten, defeated by so unexpected a method of attack. Its raucous bellowings subsided, it calmed down, and in another half a minute the nose-rope was again secure beyond breaking. Then Zaman Shah swung a terrific blow at the camel's head with his right hand, releasing his bite at the same instant. The blow never fell, for the camel jinked violently to the left, as intended, and as it did so the sowar sprang two yards away to its right, with the agility of a cat. Then he spat, twice only, and told the wondering Rogers that "his father had taught him that trick when he was a boy." Personally, I should not have volunteered as a pupil in the art!

Thereafter progress was smooth. Mir Ismail, our guide of yesterday, departed amidst salaams; Jahan Khan, his successor of to-day, had somewhat a sinecure over five easy miles. By half-past three we debouched into the little plain wherein Mamand lies, and by a little after four our 80-pounder tents and their small apparel of X-pattern furniture afforded to us a "home from home" ready for the night.

(To be continued.)

EDUCATION IN EGYPT

BY LADY DRUMMOND HAY

"Our glories in the past, as also our sacred traditions, will aid us to urge forward our Fatherland at its rebirth towards that human perfection which throughout the struggles of peoples, and through all the speculations of philosophers of every age and every country, from Aristotle to Leo Tolstoi, has been the dream of countless centuries, the dazzling beacon light in the centre of the ideal horizon of the human race."—*King Fouad*.

Now that Egypt has attained her new status it remains to be seen whether she is capable of fulfilling the high ideals expressed above, or whether her Government will prove incompetent to bear the burden of the direction of the State, unaided, to all intents and purposes, by a friendly Power.

For a country whose destiny has, for so many thousands of years, lain in the hands of successive conquering nations, this might appear, save for certain influences, to be an extremely difficult if not altogether hopeless task.

The first influence to which attention may be drawn is the improved status of the mass of the people who are beginning to have some glimmerings of self-expression, some vague appreciation of the benefits of civilization, thanks to an extended system of modern education, fostered by the British during their occupation, and always warmly supported by King Fouad.

In practically no country could education, both elementary and high, have made greater strides in a comparatively short time.

It is significant of the spirit of young Egypt that the majority do not need any persuasion to avail themselves of the privileges of education.

Additional schools and colleges are constantly being

opened up in the big cities to cope with the increase in the number of students, both children and adults.

The provincial schools are crowded, and even in outlying districts no town is complete without its school, where the children can obtain a rudimentary education before passing on to a more important educational centre. Even in these village schools the education is sound and rational, the curriculum consisting of the three R's, with a generous portion of time allotted to the study of the Koran. In the girls' school the little pupils are taught to sew, and to read, encouraged to speak the truth, and instructed in the rudiments of hygiene.

Many of the big provincial towns have become noted centres of education, and boast large modern schools, under professors of repute.

In these schools all modern subjects are taught, but religious instruction is never omitted, nor are the long repetitions of the Koran curtailed. This profound study and constant practice of religion constitutes the unassailable strength of Islam. The Koran is the base upon which all social and civil laws are established ; it is the inspiration of art, music, and literature, and is the veritable book of life for tens of millions in this world.

Not so long ago a schoolboy's education was complete when he could repeat the entire Koran from memory. The learning by heart of the Koran is still a desirable and commendable achievement, but no longer deemed sufficient to cope with the needs of this material age.

The youth of the present day finds himself better equipped for the struggle for existence, which is less hard, however, in Egypt than in most countries. Technical schools have been established, where every trade is taught—model workshops for engineering and carpentering, model farms for the practical demonstration of every branch of agriculture, classes for pupils destined to become shoemakers, silk weavers, cotton spinners, embroiderers, brass workers, etc. These schools are not confined to the big

cities alone, for the majority of large provincial towns can also offer a sound technical education to the many prospective pupils who come in from the surrounding districts.

Cairo shelters two Universities. El-Azhar, the celebrated Muhammadan University founded in A.D. 972, is the chief Muslim religious institution in Egypt, whose students number more than 15,000, a large proportion of whom come to it from the most distant countries; and the Egyptian University, founded some fifteen years ago by the efforts of King Fouad (then Prince), who launched an appeal for public subscriptions with such success that in less than two years more than £20,000 were collected, without counting hundreds of "feddans" (acres) assigned in trust, and important annual donations to the University. Prince Fouad was the President-Rector until 1913.

In the month of June, 1908, the University was recognized as an institution of public utility. In September it sent to Europe its first mission of students; in December it was formally inaugurated, and threw open five courses of study to the public. At the same time a library of more than 15,000 volumes, and arranged in the most up-to-date manner, was formed and rapidly organized.

In the same year a great number of learned men, gathered together in Cairo on the occasion of the International Archæological Congress, and delivered lectures at the University. At the beginning of 1910 a new mission was sent to the Universities of England, France, Germany, and Italy. Professors from the leading Universities of Europe came to give courses of lectures in Egypt. At the personal request of the Prince, the Ministries of Public Instruction in France and Italy threw open the doors of their Secondary Schools to Egyptians of eight to ten years of age, selected and sent abroad by the University, and, as a mark of special courtesy towards H.H. the Prince-President, the French and Italian Governments charged themselves in addition with all the expenses for the boarding and instruction of these young pupils.

The following year (1911) the Egyptian Government doubled its grant-in-aid, and the Prince went on a journey through Europe, which proved most profitable for the University. At London, Paris, Berlin, Buda-Pesth, Prague, Rome, and Vienna, he everywhere contributed to the strengthening and development of the University. He gathered rich collections of works and medals. To-day the collection of medals at the Egyptian University is the most complete in Egypt.

At the same time a section for women was created, the advantages of which were not long in asserting themselves, in spite of certain criticisms. But Prince Fouad was not unconscious even then of the influence of the education of women from the point of view of the morals of a civilized society, although it was in the early days of the feminist movement.

Perhaps the most vigorous scientific association actually existing in Egypt is the Society of Political Economy, Statistics and Legislation, created by the personal initiative of King Fouad (when still Prince), who continues to honour it as President.

This Society brings in association all the men of science and intellect in Egypt. Its periodical, *Contemporary Egypt*, is familiar to the students of every country.

In addition to the three above-mentioned educational institutions, there are many flourishing colleges and schools in Cairo, and the yearly increase of students eager for instruction necessitates the opening of more and more centres for every form of study—science, religion, art, and technical trades.

These schools are generously supported and the scholars encouraged in a practical manner by the King and the Government.

The second influence lies in the almost complete emancipation of the upper-class Egyptian woman, and in the fact that strenuous efforts are being made to educate the woman of the working classes, for it is in the intimacy

of the family hearth, where the mother reigns supreme, that the children of a country—the citizens, the learned men, the soldiers of the future—receive their first education, which forms the basis of their character and inspires their feelings and actions throughout their lives.

King Fouad was not unconscious of this when he arranged a special course at the Egyptian University for women of the educated classes, and organized the institution of "Feminine Industries" in 1916 for uneducated women of the lower classes. So successful was this institution in regard to women's handicrafts, and so apparent were the benefits derived therefrom, that, in 1918, the Ministry of Public Instruction granted it a subvention, which allowed it to institute courses in Arabic, arithmetic, design, and cutting, thus completing the professional instruction offered to the daughters of the people. The classes for study produced such satisfactory results that it was easily recognized that the consciousness of being able to attain a higher intellectual level could not fail to exert the happiest moral influence upon those whom the Society took under its charge. Apart from this, according to information supplied by the Ministry of Education, the total number of girls receiving elementary vernacular education in schools in 1921 was 46,582, of whom 7,690 were in attendance at the fifty-one girls' elementary schools maintained by the Ministry. The Provincial Councils maintained eighty-one elementary schools, attended by 7,592 pupils.

Thus is the happier lot of the Egyptian woman assured, and the children of the nation will be born into healthier and saner surroundings, growing up fitted to assume the responsibility of full and understanding citizenship.

Since his accession to the throne of Egypt, King Fouad has amply fulfilled the expectations of his friends and people.

Although little more than four years of his reign have elapsed, they count already in their results among the most important and most fruitful in the national history of

Egypt. But the task is far from being completed either for the King or for his people. The intellectual and moral uplifting of the nation, its economic, scientific, and social development, its advance to the high rank which it should occupy in the sphere of learned researches and intellectual speculations, which enhance the prestige of a people, extend its influence and contribute to the general progress of humanity—such had been the ideal pursued devotedly by Prince Fouad, at a time when he had not, and could not have, any higher and finer ambition than that of serving his country. Succeeding to the throne at a moment when the country's future was threatened by the gravest perils, he proved himself equal to the situation to which Providence had summoned him.

LITERARY SECTION

LEADING ARTICLE

INDIA, PAST AND PRESENT

ROUGHLY speaking, the history of India may be divided into four great periods, each of which gradually merges into the next. Of the first of these, the prehistoric, we know very little. Controversy still rages over the Aryan question, who the Aryans were and whence they came. Scholars have maintained that they imposed a new and higher civilization upon the inhabitants, and have in effect so moulded the destinies of the country that the product of their innovations, modified by the impact upon indigenous customs and beliefs, is the India which we know to-day; there are, however, advocates like Dr. Gilbert Slater,* who contend that the Dravidian culture is the older, and that it is the South rather than the North from which the whole country obtained the peculiar cast of its civilization. These are conjectures. Our knowledge is derived from no certain records. We glean the facts of history, of geography, of wars and political divisions, of social structures and artistic progress, from a mass of literature which was designed for other purposes, which is sometimes clearly legendary, and which, as material for deduction, is often vitiated by the additions of later hands.

The political historian could afford to ignore these indistinct shapes, were it not that in India, perhaps more than in any other country, there stand out in bold relief great monuments of that bygone age which have endured to this day, weathering the many storms of war and destruction that have raged throughout the country. For those great relics have had too vast an influence to be ignored. The institution of caste, no matter how it arose, nor whether it was the bequest of the Aryans, or, as Dr. Slater argues not without force, came originally from the South, is as strong to-day as when the early inhabitants

* "The Dravidian Element in Indian Culture" (Benn Bros.).

first conceived the idea of dividing society into the four great sections, and fenced it round with rules innumerable. The Vedas are still for Hindus the repository of wisdom, and the influence of the Atharva Veda can yet be traced among a people who wear iron to charm away devils, throw limes in the air to ward off malicious spirits, and in this twentieth century can even murder a father and his young boy on suspicion that the Government was about to sacrifice the latter as a propitiatory offering to the god or goddess of a stream. Magic and incantations go hand in hand with Western science, and the father who wishes to call in the doctor must give way to the mother whose faith in mantrams no demonstration can shake.

The East has been called unchanging, and it is the fashion of modern writers to challenge the epithet; but it all depends on the point of view. Deep down in every Hindu heart are rooted the old beliefs, the old customs, even the old superstitions, for the voice of archaic Nature is divine. This it is that has hindered the well-meant efforts of missionaries, the teaching of scientific agriculture, and the practice of scientific medicine. Agricultural methods have after all shown little advance upon those early times; medicine is still referred back to ancient books, and we need not wonder that religion—that passionate heart-beat of the Indian people—should have withstood alike the assaults of Buddha, Aurangzebe, and of fiery Portuguese apostles.

For if the keynote of Christianity is love and of Islam is reverence, let us say that the keynote of Hinduism is joy. The gods of the Aryans were the impersonation of Nature, usually in her bright and munificent moods, and the hymns of the Rig-Veda appeal to them for protection even when they seem most forbidding. Heaven to the early Indian was peopled with bright creations, which gave way eventually to the more subtle concepts of Siva and Vishnu. Dr. Slater argues plausibly enough, basing himself on the universal symbol of the first and on the *namam*, incorrectly called the "caste mark," of the second, that Siva and Vishnu were variants of the same idea, the idea of procreation. To Siva is usually allotted the attribute of destruction, to Vishnu that of preservation; but the austere god ought rather to be viewed as the Purifier, who cuts away ruthlessly all that is old and decayed and worthless, leaving a new and beautiful world for the other to preserve. In this view they are the gods of the spring, most joyous of the seasons, when bountiful nature is full of new life,

and the dead ashes of the forgotten winter are put out of sight as a gardener lops dead wood from a tree. Dr. Slater holds the view that the doctrine of Nirvana is pessimistic, and contrasts it with the Western hope of eternal life. That is to misconceive entirely the meaning of Nirvana, and betrays the natural obsession of Christian individualism. The spirit shall return to God who gave it; there is philosophically no pessimism in the thought that it will again become part of the Universal One from which it emanated. To the Hindu the monistic idea is as full of hope as to the Christian the individualistic idea of the separate immortality of the soul.

Endowed with these great conceptions of caste and religion, India entered upon her historical career. The earliest date of which we have sure knowledge is the invasion of Alexander in 327 B.C.. Then arose the Mauryas and the Guptas and the great Asoka, whose zeal for Buddhism has become a byword. This is the golden age of Indian art. Music was encouraged. Poetry and philosophy flourished, and with the name of Kalidasa drama reached that zenith which in England we are inclined to ascribe to the Elizabethan era. Politically the country had undergone the usual experience. Nomadic tribes had gradually settled into small states, whose interests and ambitions kept them in a state of war. The king was usually a warrior intent on self-aggrandizement and the enlargement of his borders, and, much as we find in the early history of Germany, there arose from time to time a stronger monarch, who for the time being founded something resembling an empire. Those who contemptuously exclaim that India never has been a nation, and argue from this that she never will be, forget the conditions of her early career. For these are the times before the conquest of England. More than two centuries were to run before England, admittedly the oldest of the Nation States, received a truly national king. Nationhood in Italy was deferred until the middle of the last century, and the federal system which constituted the Empire of Germany was established even later. How, then, can we expect to find nationality in India at such an early age?

For in A.D. 1000-1027 there came the great cataclysm of the Mussulman invasions. Spain, we may conceive, and Sicily were fortunate in that the Mussulman invaders were of a cultivated stock, whose civilization was at the time not inferior to, and probably higher than, that which they displaced. Mahmud of Ghazni, Mohammed Ghori,

and Mohammed Tughlak were little better than savages in culture, and it is as such that we must regard them rather than as the apostles of Islam. As raiders and not as apostles they stormed their way through blazing villages and ruined fields. Literature languished and for the time died. The arts degenerated. India, or rather Upper India, was given over to the horror of rapine and slaughter, and what priceless treasures may have been engulfed in this devouring flood we shall never know. Amidst the welter Hinduism and the masses of the Hindu people stood like a rock, so that even the one justification of conversion to the true religion, as they undoubtedly held Islam to be, must be denied to these barbarians.

These were, however, incursions. They left no abiding mark upon the country except the negative mark of a temporary destruction and the loss of irreplaceable treasures. In 1526 we reach the third great period of India's history. The restless ambition of Zahir-ud-din, poet, soldier, diarist, and epicure, finding no satisfaction in Central Asia, sought realization in Kabul, and thence carried a conquering host through the still undefended North-west Frontier into the heart of India. The Moghul Empire was founded upon the ruined armies of Mussulman and Hindu alike. Thirty years later Akbar made the first serious attempt to consolidate, but again we must deplore the result when the kingdom depends on a single personality, and falls into weaker hands. Akbar died. Dynastic dissensions arose, and when Aurangzebe began his long and disastrous reign he succeeded to an enlarged empire, but one which already showed the signs of weakness.

Disastrous to Hindu art and culture though the Mussulman invasions had been, and to-day to be regretted politically from the open and enduring antagonisms of religion, which are one of the most formidable bars to the achievement of Indian nationality, they have left behind them great monuments of culture. That Aurangzebe should have destroyed a vast number of temples and other records of a religion not his own is a calamity. But the Moghul Emperors were patrons of the arts. Babar was himself a poet, and his diary is probably unique among the writings of crowned heads. Literature began to revive. A new school of painting arose, and the miniatures of the Moghul Court are famous. Above all, they were builders, especially Shah Jehan, and the glorious palaces and tombs and mosques which they left go far to compensate posterity for losses in other directions. They were also for the

most part capable administrators. Had the tolerant policy of the great Akbar been continued by his successors it is possible that the Empire might have lasted longer.

But that was not to be. Sir Verney Lovett* in the "Nations of To-day" series attributes the speedy decay of the Empire to the personal qualities of Aurangzebe. His bigoted fanaticism, he says, sowed the seeds of rebellion among his Hindu subjects; his austerity disgusted a people used to display, and his desire to subdue the distant Sultans of the Deccan entangled him in constant war. For the last and most important item of the list Aurangzebe was not entirely responsible. In their desire for territorial aggrandizement the Moghul dynasty failed to realize the truth which all history teaches, that you cannot retain hold over an extensive empire without adequate communications unless you can count absolutely upon the loyalty and ability of your lieutenants. Transport by sea did not exist; the roads were no better than could be expected of the age, and in the absence of bridges rivers became unfordable. The peculiar climatic conditions of India enhanced the difficulties. The fierce heat must have told severely on those hardy soldiers who had followed the Moghul fortunes from Central Asia, and in the monsoon both roads and rivers became impassable. The strongest hand and the wisest head were needed for the Imperial dignity, and when these failed disruption began to show itself.

It was then that the Marathas, under the capable leadership of Sivaji, were in the van of rebellion. Aurangzebe died in 1707, and the Empire fell to pieces as quickly as did the Macedonian on the death of Alexander. Various satraps set up independent States, and over all towered the great Maratha power. The Moghul sank to the position of a puppet Emperor. But the Maratha Empire did not last long. India was once more distracted by devastating war, for Delhi was twice sacked by invaders in 1739 and 1756, and 1761 saw the crowning disaster of Panipat, which brought with it the twilight of Maratha ascendancy. Holkar and Scindia were by this time practically independent; the successors of Sivaji had proved unequal to the burden of Empire, and the sceptre fell from their weak hands into those of their Brahman advisers for the remainder of the Maratha career. Meanwhile, a century and more before this, an event had occurred, insignificant in itself, yet destined to bear amazing fruit. In 1612 an English factory was established at Surat.

* "India" (Hodder and Stoughton).

It has often been remarked that, unlike Babar, the English did not deliberately apply themselves to the conquest of India, but were forced into it by circumstances. Less stress has been laid upon the peculiarly favourable moment at which they asserted themselves. Wonderful as the achievement was, we can now estimate at their truer value the forces against which they had to contend. Those forces were, however, unknown at the time; Clive did not realize the quality of the troops opposed to him. How quickly troops can degenerate the Prussians showed us in 1806, when the soldiers of Leuthen and Rossbach had already become the soldiers of Jena and Auerstädt. The flower of the Indian troops had been wasted by incessant warfare ever since Aurangzebe had entered upon his disastrous policy of expansion, and the dissolute character of many of the smaller rulers did not conduce to the maintenance of discipline.

The English star may thus be said to have risen just at the time when disruption and degeneracy were at their height. But a long series of wars was before them, as dominion gradually spread first to the south and then to the west. The Pax Britannica did not really begin until the suppression of the Mutiny. War after war marked the careers of a long procession of Governors-General. The battle of Wandiwash, which almost synchronized with the overthrow of the Marathas at Panipat, marked the end of the long rivalry between English and French. The battle of Buxar, in 1764, brought the English as far as Allahabad and the plains of the present United Provinces. In 1774 the Rohilla War was undertaken; in 1775 the first Maratha War. In 1799 Seringapatam was the final scene of a long war with Haidar Ali and Tipu Sultan, in which the English power was in jeopardy. In 1803 there was the second Maratha War, and in 1804 war with Holkar. Between 1817 and 1819 the Pindari and the third Maratha Wars. The first Afghan War, in 1839 to 1842, was followed by the first Sikh War of 1845, and the second Sikh War was in 1848. At last, in 1857, came the crowning horror of the Mutiny and the transference of India to the Crown.

This bare recital shows most effectively the troublous times of the Company's early days. No part of India entirely escaped, unless it be the extreme south, which had always been immune from the earlier invasions. One feature stands out. In only one case was war undertaken against a foreign Power, and that was not waged on Indian soil. Since the British Power became paramount the gate

of the north-west has been kept closed. The wonder is that with the experience of Mahmud of Ghazni before them the native princes did not close it sooner.

But, though wars raged, administration went on. When Clive first left India the scandal of underpaid Company's servants scrambling for rupees was so great that the ryot might have been pardoned if he thought that the Company's little finger was thicker than the loins of the marauders. But this did not last long. The principle was quickly established that the country must be ruled in the interests of the governed, and the Company changed from a trading into a political organization. In a period full of interest two events stand out by reason of the enormous influence they have had on present-day life in India. In 1853 Lord Dalhousie wrote his famous minute on railways, with the result that seventy years later the total mileage was over 37,000, and the State lines alone carried 500 million passengers, as well as 90 million tons of goods. Satisfactory as this is as an indication of prosperity, it is a great deal more. It shows that the institutions of the West have taken a real hold on the country; for the pilgrim the railway has become as necessary as for the trader; for the humble ryot anxious to announce the birth of a son the telegraph is as much a part of life as to the business firm anxious to sell in the best market. It were superfluous to dwell on the strategic importance of the railways, but it is not too much to say that many an internal commotion has been avoided by the prompt despatch of troops, and the railways alone have permitted the distribution of the forces so as to preserve internal order instead of concentration at the most vulnerable points against an external enemy. It is the railways that have enabled the Conferences and Congresses to meet, and that have thus indirectly assisted towards the realization of nationality. When Mr. Gandhi preached his gospel of the simple life of the Vedas and counselled all men to eschew Western inventions, he did not disdain to use the railway and the motor-car, either because they were too convenient to be taboo, or because they—the first, at any rate—had so grown into the national life that they had ceased to be regarded as Western.

The second great landmark of the period was the momentous decision of Lord William Bentinck's Government to conduct education upon English lines. The effects of this are sufficiently obvious. Writers are never weary of telling us how it has created a discontented crowd of men jostling one another in the struggle for a bare subsistence,

and how it has given preponderance to the lawyer ; how it has turned away interest from agriculture, and how it has fostered the growth of journalism, good and bad. Nor need we dwell upon its obvious advantages. The point we would wish to make here is that it has entirely altered the relations of the civilian and the soldier. This it has not achieved alone. The success of the lawyer class is largely due also to the complications of the law in the hands of a subtle people. Hindu and Muhammadan laws were framed for a less complex society ; their subtleties, reinforced in some cases by superstition, have given ample scope to fertile brains, and the elaborate safeguards by which justice is fenced have enlarged that scope. The profession of the law became at once the most learned and the most lucrative. The long immunity from foreign war relatively depressed the soldier, and his bluff temperament declined the sedentary occupation of school learning. It is notorious that the least warlike races of India have furnished the brains ; the United Provinces and the Punjab gave half a million of men to the Great War, while Bengal furnished only a meagre 7,000. Moreover, the army has a large proportion of Mussulmans who would be the first to acknowledge that the nimbler brains of the Hindu have left them far in the rear.

For the Biblical period of forty years after the Mutiny the land had peace, and these were the most prosperous years of British rule. This was no doubt due in part to the great industrial revolution in England, the effects of which were not immediately felt in India, and have not even now reached their fullest expansion. It was in these years that the first advances towards self-government were made, though the idea of associating Indians in the government had taken shape long before, and indeed had never been absent from the minds even of the early administrators. With the rest of the story we are tolerably familiar. In 1897 Tilak, brooding no doubt on what had gone before, raised the standard of Home Rule. In 1907 India was a prey to anarchy and murder, committed not this time by ruffians, whose trade they were, but by would-be patriots, unbalanced youths who thought that to kill a stray Englishman, or, in default, a loyal Indian servant of the Government, was to do a lasting service to the Motherland. The first hesitating admission of Indians to a share in the Government expanded into the grant of a limited local self-government and the establishment of the Legislative Councils. These again were enlarged by the Morley-

Minto reforms, and the declaration of August, 1917, has taken the momentous step of the effects of which we are witnesses.

This rapid survey of Indian history has necessarily been confined to a few salient points, and this has led to a reversal of the process which Sir Verney Lovett has adopted in his book. He has allotted a full two-thirds of his space to the British period, and has thereby left the impression of passing too lightly over important factors that have gone to the moulding of the Indian character. In telling India's story recent events must be prominent, and, as in all histories, the wealth of modern material leads to detailed description. But was it really necessary to tell again the old story of Hastings' quarrel with his Council or to labour patiently through the list of Governors-General, unimportant ones as well as important? Could not a few more pages have been devoted to India's earlier history, to the unfolding of those characteristics and institutions which have left so great a mark upon her?

For the India of to-day is a strange compound of past and present. As Dr. Slater remarks: "Her great difficulty . . . is not in learning new things, but in unlearning old." And it is just because the old ways, the old superstitions, the old habits of thought are still so strong that so many critics are content with the catchword "a veneer of Western civilization." It is true also that, just because the old is old and because it is after all the mainspring of the national character, that India if left to herself would tend to relapse into the older ways and to transform into Oriental methods the methods of the West. But with a difference. England has been accused of laying too much stress upon material civilization; yet, even if that were all, the new ways, as was pointed out earlier, have so become part of Indian life that Ghandi's appeal to cast away the works of darkness and to put on the armour of light fell upon deaf ears. But it is not all. In science, in literature, in criticism, and in art India has taken unto herself new conceptions which have profoundly and fundamentally altered her outlook. But perhaps the main gifts which England has had to offer, and those, too, on which the stability of her government has rested, are a wide toleration in religion which has succeeded in curbing a too fiery zeal, sometimes rivalling that of mediæval Islam, and a public spirit which has set the example of self-sacrifice and has put the general weal before private interest and ambition. These things India has acknowledged, and when the clouds of contro-

versy are past and Indians can once more view their history with clearer vision, they will be the first to acknowledge them once again.

OUR REVIEW OF BOOKS

INDIA

FROM AKBAR TO AURANGZEB. By W. H. Moreland, C.S.I., C.I.E. (Macmillan.) 18s.

(Reviewed by H. R. C. HAILEY, C.I.E., C.B.E.)

In this book Mr. Moreland carries on the study of the economic history of India from the point reached in his earlier work, "India at the Death of Akbar." The first half of the seventeenth century, the period now dealt with, covers the establishment of English and Dutch traders in India, and their commercial records begin to cast valuable light on the course of trade and the economic condition of the country. Mr. Moreland has broken new ground in his careful examination of the Dutch records, and has thrown open a source of information, much of which is practically new to the English student, regarding the organization and trade dealings of the early European settlements and their relations with the Mogul authorities. He has found these records both fuller and more detailed than the English, and is able to show that their comparative neglect has led to the misunderstanding of important questions.

The opening chapters deal mainly with the various phases of the development of the external commerce of India. Full of interest as the subject is, it may be doubted whether, at this stage, the sea-borne traffic with Europe exercised much appreciable effect on the eternal economy of the country as a whole. The ships sailing annually were few in number, their carrying capacity small; the articles exported were consequently small in bulk and of the nature of luxuries. Its influence was probably confined to a limited number of merchants and producers within restricted areas. For wider changes we must turn to the later chapters, in which the course of the progressive breakdown of the administrative machinery set up by Akbar and his safeguards against the abuse of his revenue system is sketched. The results are traced in intolerable burdens imposed on agriculture, exacted with merciless severity from the peasantry, and in the ruin of trade by the extortions of local officials, which led to a flight from industry and the gradual impoverishment of the country. The collapse of the economic system of the Mogul Empire and the national bankruptcy which ensued go far to explain the rapid dissolution of an empire the glories of which, as viewed at the seat of Government, excited the wonder of foreign observers. This portion of the book is likely to excite controversy in so far as the picture of the state of India is at variance with that sometimes drawn by those who are tempted to

gild the past of their country. The author has, however, been at pains to support his conclusions by a weight of independent authority and by a searching examination of contemporary evidence. The book, written in the author's easy, polished style, gives a vivid picture of the conditions under which men lived at the time in India, and, from the wealth of material gathered together, and from the care with which it has been sifted, should prove of great value both to the students of Indian economics and of history.

THE EAST INDIA HOUSE: ITS HISTORY AND ASSOCIATIONS. By William Foster, C.I.E. Illustrated. (*John Lane.*) 12s. 6d.

(*Reviewed by Harihar Das.*)

In this book Mr. Foster has brought to light many important facts relating to the East India House. Mr. Foster is eminently fitted to write the history of the East India Company from its foundation under Queen Elizabeth's Charter to its transference to the Crown in 1858; his intimate knowledge of its constitution, derived from its valuable archives now preserved at the India Office, cannot be surpassed by any living authority. Many interesting features of this historic house, omitted from Grigg's "*Relics of the Hon. East India Company*," Mr. Foster has supplemented, thus making his book a complete history of the house. He does not pretend to give the history of a wider field than that covered by the foundation of the East India House and its associations.

We are first introduced to Sir Christopher Clitherow's house, which has a highly interesting history of its own. The subsequent removal to Craven House marked a period of incessant activity on the part of the Company till the new home was finally purchased, May 23, 1733. During the Plague and the Great Fire the officers of the East India House showed their loyalty by remaining there to carry on their work, while nearly all other business houses in the city were closed. In return their courage was suitably rewarded by the Company.

Mr. Foster has given some relevant extracts to illustrate the "*Weaver's Riots*" of 1696, which Macaulay also vividly described in his "*History of England*." Referring to the staff of the Company in the seventeenth century, Mr. Foster says: "The relations between the Company and the members of its household at this period form an interesting subject of inquiry—the more so as in the system then in vogue may be discerned the rudiments of many practices which became part of the established order of things in Leadenhall Street, and were ultimately passed on to the present India Office." Charles Du Bois, Treasurer, "an honoured and trusted servant of the East India Company," at this time gave great stimulus to the study of botany in England, and the connection of his family with the Company shows the loyalty of its servants in the early days.

The rebuilding of the premises in 1726-1729 began a new era in the history of the House, spacious rooms being first provided "for the use of the directors and offices for the clerks." The later history of the building was associated with a memorable meeting, held within its walls, to decide

what recognition Lord Nelson should receive for his victory over the French fleet in Aboukir Bay. About this time an "Oriental Repository" was established under the direction of Charles Wilkins as its first librarian; and we are told the story of his early collection of Sanskrit MSS. and the contributions by other servants.

The book is rich in literary allusions—gossip about Mr. Auditor Hoole, his interest in Italian literature, his marriage with a "handsome Quakeress," his friendship with Dr. Johnson, and references to his volume of critical *Essays*. Mr. Auditor Hoole was not the only clerk who found leisure for literary culture after a hard day's work in the East India House. The chapter entitled "Mr. Lamb of the Accountant's Office" reminds us that Charles Lamb, too, was a clerk in the service of the East India Company for a good many years; and Mr. Foster gives the story of his appointment, promotion, popularity, friends, salary, and retirement, along with other facts about this quaint character. James Mill, the historian, John Stuart Mill, the philosopher, and Thomas Love Peacock, the writer, held influential positions in the examiner's department, and we learn how Mill found leisure during office hours "to write a large number of letters and to do some literary work, such as articles for his *London Review*, or the first drafts of chapters for his projected work on logic." In fact, Mr. Foster has unearthed anything having an important bearing on the East India House. His masterly delineation of facts, accuracy of judgment, and wealth of reference depict at once his careful study and research. The book is abundantly illustrated, and will prove a valuable accession not only to the history of the East India Company, but also to the history of London. There could be no better historian for the work than the Historiographer of the India Office.

A SHORT HISTORY OF INDIA FROM THE EARLIEST TIMES TO THE PRESENT
DAY. By E. B. Havell. (London: Macmillan and Co., Ltd.)
1924. Pp. xii + 290. 3s. 6d.

(Reviewed by Harihar Das.)

Mr. Havell has some claim to be considered an authority on the history of India. His researches in the domain of Indian art and the wide experience gained during his long stay in that country have well qualified him for such a task. There is need for authentic text-books on Indian history in our schools and colleges, for, as Mr. Havell has pointed out in his preface, "Indian history is often written for the purpose of propaganda—pro-British or pro-Indian. It should rather be studied by everyone as one of the greatest chapters in the history of the world." Thus the author strikes the keynote of the true philosophy of history, and he is not wide of the mark in this assertion. We often find that text-books on Indian history are compiled for our schools without regard to the facts, and often seem chiefly intended to appeal to the text-book committee for selection. Then, again, there is another class of text-books written for purely propaganda purposes. This class of literature should be weeded out from the curriculum. The history of India should be rewritten; and

for such a task the co-operation of Britishers and Indians is essential. It has been well said that "in the study of history we must always be dispassionate, and in estimate severely just." The great need now is for works derived from new sources, for in this way the torch of knowledge grows brighter as it is handed on.

This book is intended for students in England and India. It contains some interesting chapters, especially those describing "The first Aryanization of India" and "The Symbolic Foundations of Indian Art." These have received sympathetic treatment, while, on the other hand, the Muhammadan and English periods have been inadequately treated, and we are doubtful about the accuracy of some of the facts, and are inclined to disagree with the author's judgments. Mr. Havell is much more in sympathy with the Hindu and Muhammadan periods than with the English. We cannot ignore the fact that he has thrown fresh light upon facts relating to the place of Indian art in history. He has also supplied interesting chronological tables and maps of ancient and modern India with a few illustrations suggestive of his subject. This volume will no doubt prove a useful text-book in the schools of India, and it may safely be commended to the authorities for that purpose.

ORIENTAL ART

WE have received from the Trustees of the "Museum of Fine Arts" at Boston, U.S.A., a copy of Parts I. and II. of their Catalogue of the Indian Collections in that museum, together with a portfolio of collotype plates.

The catalogue has been compiled by Dr. Ananda Coomaraswamy, the well-known writer on Oriental art, who is the keeper of this collection.

This work is deserving of all praise, and is a model of what such a catalogue should be.

The text-volume is in two parts, the first being introductory and general, the second dealing with the collection, while eighty-six plates illustrate individual examples. Many of these plates are repeated, generally on a larger scale, in the collotype reproductions in the portfolio. One criticism suggests itself here; there is no cross-reference between the plates in the text and in the portfolio. This would be useful, and could easily be arranged by double numbering on the plates in each case.

The introductory section in Part I. is very well done, clear and succinct, and should prove most useful to those who have no knowledge of the Indian religions and their mythology, the chronological tables and the very full bibliography adding greatly to the value of the section. The second part, dealing with the collection, is preceded by short dissertations on Indian sculpture and iconography, another very full bibliography completing the introductory matter.

Dr. Coomaraswamy in his introductory note rightly lays stress on the necessity for grasping the underlying principles of Indian art before starting to criticize. It is never easy for a European to divest himself of many of his criteria, as he has to do, before he judges Oriental art, but it

comes with study, and as Goethe remarked, ends in one's discovering the value of the new work, and, at the same time, unsuspected faculties of appreciation in oneself.

Indian art is mainly impersonal, the sculptor, in particular, being but a skilled craftsman, adhering to certain canons laid down "by the unanimous consciousness of the race."

The collection is most interesting and singularly complete, illustrating almost all periods. Many specimens are unusually fine, as, for instance, the Buddha's head from Gandhara (Pl. XVI.), which clearly shows the touch of effeminacy so characteristic for this style, the dancing Apsara (Pl. XXXII.), the fine head from Behar (Pl. XXXVII.), Avalokitésvara (Pl. XL.), Jhambhala (Pl. XL.), the apotheosis of a profiteer, the Natarajas (Pl. XLV., XLVI.), Devi (Pl. LIII.), and Kṛṣṇa dancing (Pl. LXII.), where the hands are beautifully modelled.

The portfolio, besides repetitions of many of the plates in the text, contains reproductions of paintings and drawings, as well as of examples of cloth and utensils.

The paintings lose for lack of colour, as only a few are reproduced in colours. But many are, nevertheless, very charming, especially the Raginis, as, for instance, LXXIII. and LXXIV. Some of these pictures are familiar from previous reproductions, as the "Hour of Cowdust," the delightful herd of cattle streaming home (Pl. LXXIX.). The figure of a woman (LXVII.) might almost have been drawn by some modern European artists, and shows whence they draw inspiration.

The Plague (XCII.) is curious: is it really Moghul?

The remaining parts of this catalogue will be awaited with interest, as when complete it will form a most useful addition to works on Oriental art.

Finally we must congratulate the Boston Museum, nor without a touch of envy, on possessing such generous donors and means for issuing so costly a catalogue, and making their collection available to the public.

C. E. L.

SADANGA, OU LES SIX CANONS DE LA PEINTURE HINDOUE. (*Bossard*.)

This book, by Mr. Abanindranath Tagore, is a French translation of certain articles which appeared in English in the *Modern Review* of Calcutta. It treats of the six laws of ancient Hindu painting. The author gives them as follows:

1. Rupabheda, or Knowledge of Forms.
2. Pramāṇi, or Sense of Relations.
3. Bhava, or Influence of Sentiment on Form.
4. Lavanya-Yojanam, or Sense of Grace.
5. Sadṛśyam, or *les Comparaisons*.
6. Varnika-Bhanga, or Knowledge of Colours.

He quotes them from Jashodara's commentary on the Kamasoutra of Vatsyayana. According to Winternitz ("Indischer Litteratur," vol. iii., 1923), Jashodara's work is to be assigned to the thirteenth century. But the author rightly remarks that these laws must be of a very much earlier

origin. The author adds two more laws as essential elements of ancient Hindu art :

1. Rasa, or the Quintessence of Taste.
2. Chanda, or Rhythm.

The first he derives from Mammata Bhata, the author of "*Kavyo-prakasha*," a manual of poetry of the eleventh century, who defines it as "*La Grande Sauveur, qui élève notre esprit en lui inculpent le goût de la véritable grandeur.*" The author compares it to the *divinus afflatus* of the Roman classics.

The second, he states, signifies: "*Ce qui donne l'élévation, ce qui oblige toute chose à se mouvoir harmonieusement dans une joyeuse exaltation.*" He claims that le Rythme in Sanskrit is expressed by Hladini Shakti, la Force Joyeuse, which in the "*Panchadasi*" (chapter ii., strophe 59) is described as "*elle fait se mouvoir l'esprit qui sans elle resterait immobile.*" The "*Panchadasi*," a work of Vedantic philosophy, by Madhava Vidyaranya, dates from the fourteenth century.

The first of the six laws, Rupabheda, Knowledge of Forms, is simple enough. The first essential of a work of art is a definite form, and the law recalls Mr. Clive Bell's definition of art as Significant Form. In discussing this law, the author's statement that forms in themselves have neither beauty nor ugliness, but that "*la beauté ou la laideur n'existent que dans notre esprit,*" would seem to the ordinary reader to go rather far. Carried to its logical conclusion it would appear to render the work of the artist somewhat supererogatory. An Indian pandit once remarked to the writer that the ancient conception of the duty of an artist was that he should disclose the image lying immanent in the stone as a curtain is drawn back.

The second law, Pramani, or the Sense of Relations, also presents no difficulties. It is obviously essential that in any work of art the elements combining it shall be in harmonious relations to each other. This is Design.

The third law, Bhava, the Influence of Sentiment or Spirit on Form, is the most profound and characteristic of all the six laws. It is Indian to its essence, and is bound up with the idea of *Yoga*, which is a fundamental basis of Indian art. *Yoga* is an attempt to penetrate to the soul of the thing portrayed, past "*maya*," the deceptive veil of outward appearances. By means of *Yoga* the artist attempts to give to the inner spirit of things "*a local habitation and a name.*"

The fourth law, Lavanya Yojanam, or the Sense of Grace, is also a necessary element in all works of art. Every work, to deserve the name of art, must attain to the realization of beauty in some form.

The fifth law, Sadrisyam, is rendered as "*les Comparaisons*" in the present version. In the *Modern Review* of Calcutta, Mr. Abanindranath Tagore describes it as similitude, resemblance, quality of forms and ideas. In spite of the author's eloquent and picturesque dissertation on it, the exact meaning of Sadrisyam as a law of painting remains obscure. Does it indicate the critical faculty?

The sixth law, Varnika Bhanga, or Knowledge of Colours, also includes the use of brushes and materials, and comprises the technical element in the artist's work.

Of the two supplementary laws adduced by the author, Rasa, or the Quintessence of Taste, is sufficiently clear. Chanda, or Rhythm, brings us at once to the six laws of painting of the Chinese.

The author at the commencement of his work declines to discuss the question as to whether the Indian or the Chinese laws are the older. The Chinese laws are enunciated by Hsieh-Ho in the second half of the fifth century. It is probable that the Indian laws are very much older, but in the present state of our knowledge of the ancient Indian theory of æsthetics it is impossible to prove this point. But the author rightly calls attention to the identity in the number of both the sets of laws. The mere fact that the laws of painting are enumerated with such precision points towards India as the source of the idea of presenting them in this form. "Chinese writers on art never . . . seek to create a systematic art philosophy. They are content with casual observations, conversations, anecdotes, and opinions."^{*} The Indian genius, on the contrary, is logical, analytical, speculative to the extent of fine-spun metaphysics. But while it is probable enough that the number of the Indian laws suggested that of the Chinese, it is difficult to agree with the author when he goes on to say that in their least details the Hindu rules of æsthetics find their echo in the six canons of Chinese painting. Let us look for a moment at the Chinese laws. Mr. Waley gives them as follows :

1. Spirit harmony—life's motion.
2. Bone means—use brush.
3. According to the object, depict its shape.
4. According to species, apply colour.
5. Planning and disposing degrees and places.
6. By handing on and copying to transmit design.

The second, third, fourth, and fifth laws are certainly covered by the Indian laws, but not so the first and the sixth. The sixth enjoins the transmission of classic models. The first is the characteristic and fundamental principle of Chinese art. It has hitherto been rendered as Rhythm, Rhythmic Vitality, or Spiritual Rhythm expressed in the movement of life, and whether it is rendered thus or as Spirit harmony, it indicates that a work of art should be in consonance with something outside itself and outside the artist. It is in direct contrast to the Indian Bhava, which is interior and subjective. The Chinese artist looks to the powers of the outside universe for his inspiration, the Indian, by the power of Yoga, seeks within himself the hidden means to penetrate through the superficial haze of things to the inner reality. It is true that the author translates Chanda, the second of his additional laws, as Rhythm. But this remains an interior force, quite different from the first of the Chinese laws, as his subsequent translations, Hladini Sakti and Force Joyeuse,

* "Chinese Painting," by Arthur Waley, *Burlington Magazine*.

indicate. Adherents of the Zen Buddhism in China sought to give a similar subjective interpretation to the first of the Chinese laws of painting. But as Zen Buddhism itself came from India, it is really only an additional proof of the essential difference between the spirit of China and that of India. And this difference is not merely a matter of theory, as a single glance at the great Chinese school of landscape painting, and the no less great school of Indian painting at Ajanta and Bagh, will show. Both arts are transcendental in spirit, but they attain to their destination by different roads. The two sets of artistic canons really embody the distinctive æsthetic principles of the two ancient civilizations to which they belong. It is necessary, of course, to add that in treating of Chinese æsthetic theory we are on firmer ground than in India. Until the obscure and corrupt text of the *Silpa Shastras*, the most ancient authority on Indian æsthetics, has been properly edited and elucidated, all theories as to the principles of ancient Indian art must be necessarily tentative. This statement must not be taken to imply any criticism of the present most laudable work. Every student of Indian art must be grateful to Mr. Abanindranath Tagore for bringing these laws to his notice.

This work has been rendered into French in the limpid prose of M. Andrée Karpelès. The illustrations are charmingly decorative. The primitive wildness of the strange shapes of Sigiriya has been translated into forms of truly Parisian elegance.

J. C. FRENCH.

ORIGIN OF CHRISTIAN CHURCH ART. *New Facts and Principles of Research.* By T. Strzygowski. Translated from the German by O. M. Dalton and H. J. Braunholtz. (*Clarendon Press.*) 42s.

The undoubted merit of the writer is his wide and perhaps unique knowledge of early Christian monuments in Armenia, Mesopotamia, Syria, and other countries in the East, where he has done valuable pioneer work, on which he may justly pride himself. The book, bearing the above title, is possibly a final summary of his views on the subject. In an appendix, a list is given of some thirty books, pamphlets, and contributions to periodicals, published by the author within the last twenty years, on this, his favourite, subject of art criticism. His "Origin of Christian Church Art" is a translation from the German text, by O. M. Dalton, of the British Museum, and Mr. Braunholtz. They have appended to the author's Preface a noticeable statement, to which readers, acquainted with Strzygowski's books published in German, will readily subscribe: "The translators have not found it easy to produce a satisfactory rendering of 'Ursprung der christlichen kirchenkunst.' The style of the original does not lend itself readily to an English version, and it has been almost impossible to find concise equivalents for some of the terms employed." The result has been a tolerably readable book. The defects of Strzygowski's style of writing are as obvious as the evidence of his vast knowledge is undisputable. Until now, however, his views have met with but scanty support from continental specialists, and this is by no means due only to the involved way in which he has presented his arguments.

The opposition to his points of view began when in 1901 he published "*Orient oder Rom*," designed to prove that Byzantium rather than Rome had influenced the Christian art of the West. In later publications he moved the claim to Armenia. And now it is still further East, Iran-Altai, from where the art of the Churches in the West is said to have borrowed its inspiration, he lends colour to his arguments by the introduction of many ingenious hypotheses. Fully conscious of the antagonistic attitude of most of his critics, he naturally also gives vent to his disapproval of them, dismissing them by stating bluntly, "systematic research in the history of art has hardly yet begun, at least, not in an organized form" (p. 191 and *passim*). What he aims at establishing he has summed up in passages such as the following: "Christianity and its art had no true roots of its own; wherever it went it stayed itself upon the local and national foundations which it found in existence during the first four centuries of our era" (p. 186); and "Classical Christian art dies out in the course of centuries; Christian Semitism remains triumphant in the field of representation, and Christian Mazdaism in that of architecture. With these West-Aryan classicalism intermingled in Byzantium, and later also in the West, but only at sporadic moments of revival" (p. 182). The chapter on Mazdean art opens with the statement (p. 115) "that our total ignorance on the subject of Mazdean art is not a sufficient reason for denying the possibility of its existence." Strzygowski succeeds, to some extent, in suggesting what it may have been like, and so he detects its traces in monuments of art in the West, in a church at Milan, for instance (p. 149), and elsewhere. Evidently he has thoroughly identified himself with the spirit of Eastern monuments in general: so much so, indeed, that he has little sympathy with those who, "in the narrowness of classicists," are content to see in such universally admired works of art, as, for instance, the mosaics of St. Cosma and St. Damiano in Rome, a manifestation of a genuine Christian ideal. Strzygowski would discover in it the "purifying influence of Mazdaism upon art." To make this extraordinary point of view clear, he publishes with that mosaic an old Japanese picture, which is stated to exhibit a somewhat similar arrangement (pp. 180 f.), also due to Mazdean influence. Suffice it to say in conclusion that the vast learning of the writer, to which every page of the well-illustrated book testifies, opens vistas new and previously unimagined, if even now imaginable, in the domain of study of Eastern art.

J. P. R.

NEAR EAST

A SHORT HISTORY OF THE NEAR EAST FROM THE FOUNDING OF CONSTANTINOPLE, 330-1922. By William Stearns David, Ph.D. (*Macmillan*.) 145.

With great precision and no less judgment the author of this learned book has brought before us the happenings of a great world-centre—Constantinople.

On his first page he recalls the fact, now almost forgotten, that about

660 B.C. a Greek deputation from Megara questioned the Delphic Oracle as to where they should found their projected colony.

"Found it opposite the City of the Blind" (Chalcedon), was the Delphic utterance, easy of interpretation. Chalcedon at that time was a Greek settlement upon the Asiatic side of the Bosphorus. One mile away on the opposite shore there rose a far superior site, a hill-crested peninsula, easy to defend. On the southern side was the blue Propontis, the sea of Marmora; the Bosphorus was on the eastern side, with the Golden Horn on the north. The Megarian colonists, therefore, made haste to obey the mandate of Apollo, and for more than 1,000 years this new colony, Byzantium, proved to be most prosperous, having a lively commerce with the Greek lands and the Black Sea, until it attracted the eyes of the Romans.

The Emperor, Septimus Severus, devastated it, but soon it was rebuilt again, and Licinius, an Emperor of the East, tried to reconquer it. Finally this old Megarian colony, with all its golden prospects, was left in the hands of the first Christian Emperor, who had not hesitated to set "the crucified Nazarene upon a religious equality with Jupiter Capitolinus."

The author gives us a vivid picture of this "New Rome," which was henceforth called Constantinople, the city of Constantine its conqueror, and has kept that name to this day.

Constantinople under Justinian the Great is vividly described, nor is Theodora, the famous consort of the Emperor, ignored. Indeed, an incident is narrated in this connection which shows her to have been a great Augusta, whatever her antecedents may have been.

During some serious rioting, the insurgents had succeeded actually in seizing the Hippodrome, so that the Emperor was advised to flee. He would have done so had it not been for the high words of Theodora, who refused to accompany him, saying: "Every man must die once; and for a sovereign death is better than dethronement and exile. Yonder are your ships and the sea, but I agree with the old saying that 'Empire is the fairest winding-sheet.'" This inspired the guard corps defending the Emperor to make another desperate assault to overpower the revolution, and in that they succeeded. It was at that time the old Hagia Sophia had been burned. But Justinian and Theodora at once set to work to rebuild it. And with what splendour this was done is best told by a contemporary, Procopius, who wrote: "Hung by a chain of gold from the height of heaven, the splendour of the columns and marbles so brilliant, and the blaze of gold and silver and gems upon the altars, is unequalled." The church was built in the form of a Greek cross, 241 feet long by 224 feet broad, and its glory was its enormous dome, 100 feet in diameter. Justinian is reputed to have cried aloud when his great work was finished: "Oh, Solomon, I have surpassed thee." Indeed, if his reign had produced nothing else, he would live through history as the inspirer and patron of the builders of Hagia Sophia. On the other hand, Justinian's codification of the Roman law written in Latin represents one of the last triumphs of the strictly Roman tradition after its transference to the shores

of the Bosphorus. Greek translations were immediately undertaken and published. Through his great general, Belisarius, Justinian had succeeded to reconquer Africa and more than half of the defunct Western Empire. But herein lay the reason that he left his Empire, in spite of his victories, financially exhausted.

With Leo the Isaurian, who saved Constantinople from the Saracens in 717, begins the Byzantine period of the Empire and its apogee, until Romanos IV. was defeated at Manzikert by Seljuk Turks, bringing with it the loss of Asia Minor.

Mr. W. S. Davis, not without reason, lays great importance on these calamitous results of Manzikert, which hitherto, according to him, has not been sufficiently appreciated: "With it, the great war machine of Bysance that had held back the invader for hundreds of years was ruined beyond genuine construction. Indeed, the effect of that lost battle is even felt to this day, while the Ottoman Turk, cousin and successor to the Seljuk nomads, aggravates since centuries the problems of the Near East. The loss of a large army, the captivity of a great Emperor, and with it the loss of the whole of Asia Minor, struck a permanent blow alike to the military and the economic strength of the Empire." Nevertheless, partial restoration of the Empire was accomplished during the subsequent Greek period of the Empire by Alexios Komnenos, who was a good warrior and a better diplomatist. It was in his reign that the first Crusades began. The Fourth Crusade, which the author calls the iniquitous one, and of which he gives a most readable account, ended in the sack of Constantinople and the establishment of a feeble Latin Empire on its ruins. The one redeeming point which throws a better light on the Latin Church is the fact that Pope Innocent III. refused to congratulate the Crusaders on their victory, telling them, instead, that they had made the reconciliation of the Greeks with the Papacy more difficult than ever, because, he said: "Now the Greeks see in the Latins only treason and works of darkness and loathe them like dogs." History abundantly indicated this fell prophecy. Baldwin of Flanders was subsequently proclaimed Emperor; to him was given the sight of Constantinople, now deserted by two-thirds of its inhabitants; a Frankish king was set up at Salonica, pledged to do homage to the Latin Emperor. The Venetians asked as their formal right one-third of the conquest; they annexed Crete and all the Ægean isles and many other desirable harbours. They soon had the joy of seeing the complete ruin of the commerce and merchant marine of their Greek rivals. Christian Constantinople never was to be her glorious self again. The author points out that the Greeks, in spite of their misfortune in leaving their glorious city, founded another Empire at Trebizond on the Black Sea, including a long strip of coast-land in the old region of Pontus and Paphagonia; Epirus, too, organized itself as an independent Greek state, and its dynast wrested Salonica from the Westerners. But the actual rally was made at Nicæa in Bithynia.

At this venerable city of the Creed, recovered from the Seljuks, Laskaris, the ablest general of the dethroned Angeloi Emperors, set up

his capital, and was called the "Basileis in Exile." He repeatedly flung back the Turks when they tried to take advantage of the Christian calamities. After his death the succeeding Emperors built wisely on his foundations. It was the Nicæna Emperor, Michael VIII., who subsequently surprised and stormed Constantinople, which they never ceased to call their own, in 1261. So the fourth crusade, which ruined and destroyed that unique city on the Bosphorus, was a gigantic failure, for Constantinople, being purposely deprived of all its resources, never recovered, and became in the following centuries a much easier prey to the Turks to whom, unaided by the Christians of the West, it at last succumbed in 1453 to Mahomed II. when the last of the Palaiologoi fell sword in hand defending the walls of his noble city. But even then this great city so much impressed the descendants of Ertoghul (the brave leader of a nomad horde) that, instead of annihilating it, as the crusaders had done, the conqueror founded his monarchy on the Byzantine heritage he had subjugated. It was with the help of the noble Byzantine families, that clever and adaptable phanaroite aristocracy, that he and his successors learned to govern their newly acquired territory. Moreover, they adopted and imitated willingly the luxurious habits and the splendour they found in the Byzantine palaces, and, above all, the Hippodrome. The conqueror deemed it good policy to allow the Greeks to practise their religion in their churches, to elect their patriarch, and to continue their schools. By this very act of Mahomed II. the Greeks kept and cherished the feeling of their nationality, even if in many cases they abjured their faith for outward worldly reasons. The consequence was that all the Slav people, from the Russians to the Bulgarians and Serbs, adopted the Orthodox faith. Moreover, the marriage of Iwan III. with Sophie, the last of the Palaiologoi (1472), proclaimed Russia to be the political heiress of Byzance; hence the two-headed Byzantine eagle adopted by the great prince of Moscow. Nowhere else as in the tsarist Russia has been so well preserved the image of the disappeared Byzance. But not only Russia, Bulgaria, and Serbia in times gone by, and even in later years, dreamed to have a right to this heritage promised to them by mystic prophecies which did not come true. And last, not least, Greece, perhaps the most legitimate of the pretenders, has hoped for centuries to come into her own again, and was doomed, too, to be disappointed. Mr. W. S. Davies devotes, in conclusion, lucid pages to this entangled history of the Near East, where Russia, England, France, and of late also Germany, have played so important a rôle. It should be perused by all those who are anxious to be enlightened on a problem which for the last century has been the sinister cause of still unsolved disturbances. The author ends up with the following prophetic words: "For many years to come the eyes of thoughtful men will be turned anxiously upon the complex problem of the 'Near East.' To understand even a modicum of these problems it is needful to read the long-tangled history of their past." A glance at the list of books the author has consulted shows us how widely he has read before taking upon himself the task of writing this concise and learned book which, to say the least, fills a long-felt gap in our history. L. M. R.

FOREIGN BOOKS

LA MÚSICA DE LAS CANTIGAS: Estudio sobre su origen y naturaleza por Julián Ribera. (Madrid.)

(Reviewed by SIR THOMAS ARNOLD, C.I.E.)

The subject of the possible influence of the Arabic poetry of Spain on the poetry of mediæval Europe is of interest to a much wider circle of students than that of professed orientalists. At the end of the eighteenth and during the early part of the nineteenth century the prevailing opinion among historians of literature was that the Provençal poets borrowed from Arabic poets their characteristic doctrine and their romantic devotion to the lady of their choice. But these scholars had only a scanty acquaintance with Arabic literature from which to draw arguments in support of their thesis, and the Romanticists of a later generation had little hesitation in rejecting this proposed derivation, and traced the origins of this Christian poetry either to the Normans, or to the indigenous folk-poetry, and to the conditions of social life in Provence itself. Modern scholars have revived the earlier opinion, but this time with larger knowledge. The latest contribution to the subject is contained in the third volume (printed under the auspices of the Royal Academy of Spain) of the collection of songs by that enthusiastic admirer of Muslim culture, the learned King of Leon and Castile in the thirteenth century, Alfonso X. He kept a number of Muhammadan scholars at his court engaged in making translations from Arabic into Spanish, and extended his patronage to Arab musicians also. His songs have been submitted to a careful study by Professor Ribera, who has discovered that the metrical forms used by King Alfonso are based on well-known Arabic metres, and in Arabic music he claims to have found the clue to the interpretation of the music of the Cantigas, which has hitherto baffled the efforts of students of music. Professor Ribera has also investigated the history of music in Arabia, and has written an attractive account of the cultivation of it in the court of the Abbasid caliphs of Baghdad, and of its introduction into Spain, where singers and musicians were similarly encouraged by the caliphs of Cordova. His researches have led him to the conclusion that it is from this Arab music that came the first impulse out of which grew the music of the Troubadours, and ultimately that of the Minnesinger in Germany. His erudite investigations into metrical forms and musical notation have synchronized with the studies of German scholars who have arrived at a similar conclusion from another point of view—namely, that the general outlook upon life, and especially the treatment of the subject of love, in Provençal poetry, have closer affinities with Arabic poetry than with any previous literature of Christian Europe. The study of the problem from this subjective point of view is fraught with special difficulties, which are obvious from the very nature of the investigation. Professor Ribera has given to the whole discussion a more rigidly scientific character by concentrating attention on musical and metrical forms, and his work will demand the serious consideration of students of this interesting problem of literary history for some time to come.

HANDBUCH DER ISLAM-LITERATUR. Von Professor D. Gustav Pfannmüller. (Berlin und Leipzig: *Walter de Gruyter and Co.*) 1923.

Interest in Islam and the numerous problems connected with the Muhammadan world has been much stimulated in recent years, and the number of serious students of Muhammadan subjects is now considerable. Missionary societies are paying more attention to the secular rival of the Christian faith than has been the case for many centuries, and the number of manuals published for the use of study circles is evidence of the importance they attach to a wider knowledge of the Muslim religion. Mesopotamia, Palestine, Egypt, and Turkey have become realities for many young men whose period of military service brought them into touch with Muhammadan populations, and thereby aroused a new interest. For such students and many others anxious to extend their knowledge no specialized bibliographical guide has hitherto been available, and Professor Pfannmüller's work will reveal to most readers an unexpected wealth of material. He has grouped his subject-matter under headings such as geography, political history, religion, philosophy, art, and literature; but his work consists of no mere list of books, for the various sources are analyzed and submitted to a searching criticism, so that the reader may distinguish between writings of first importance and mere compilations. Of special interest are the author's accounts of the political history of Islam, and of the biographies of Muhammad, in the latter of which he gives a detailed study of the original Muhammadan sources and of the estimate of the Prophet formed by the Christian world from mediæval to modern times.

Professor Pfannmüller's work is primarily addressed to those who are not Oriental scholars (for Orientalists have plenty of technical journals of their own). Herein lies its special importance for the general reader, and no student of Islam can well afford to be without it.

GENERAL

THE GROWTH OF CIVILIZATION. By W. J. Perry, M.A., Reader in Cultural Anthropology in the University of London. (*Methuen.*) 6s. net.

Last year appeared Mr. W. J. Perry's remarkable book, "The Children of the Sun," followed shortly after by his "Origin of Magic and Religion." We now have to notice a third volume, as a companion to the other two, which briefly summarizes their arguments and adds further details.

Civilization began when man ceased to be a food-gatherer and became a food-producer. From the peculiar nature of the country, and particularly from the annual inundation of the Nile, there can be no doubt that Egypt was the birthplace of civilization—the land, that is, in which irrigation and agriculture were invented. The enormous advance which these discoveries gave the Egyptians over their contemporaries placed them far ahead, and they had developed a complex civilization long before other peoples of the world had abandoned food-gathering. The Egyptians were the first

builders of sea-going ships, and in their search for gold and other commodities precious to them they exploited the resources first of neighbouring lands and then of far-distant countries, leaving everywhere marks of their own peculiar customs. Indeed the Egyptians, or other peoples closely in touch with them, finally spread their culture all over the world. That there was a definite migration of Egyptian culture is beyond question, for it is impossible to believe that such customs and beliefs as mummification, dual organization, pyramid and megalith building, irrigation, and a host of others could have had a spontaneous and simultaneous origin in so many widely separated lands. We have not to rely on mere negative evidence, for, thanks to Professor Elliot Smith, the late Dr. Rivers, and Mr. Perry, we now have the materials for a complete demonstration of the migrations of culture. That megalithic monuments are identical in geographical distribution with gold, tin, copper, and other objects sought by the Egyptians or by other peoples who borrowed Egyptian ideas brings our own country into the scheme, and Mr. Perry believes that the mineral resources of Devonshire and Cornwall were exploited by Egyptians or by people in the closest touch with them.

An important section of the book deals with the origin and development of war and with its effects on civilization. Mr. Perry shows that warfare grew out of the development of certain social institutions, and that it is not natural to or inherent in mankind.

This book, and those which went before it, should be carefully read, not merely for their archaeological interest, but because they throw much light on the rise and growth of civilizations, on social institutions, and of the deep-seated aspirations and endeavours of mankind which underlie the conduct of nations as much at the present day as in antiquity.

W. R. D.

THE ROMANCE OF EXCAVATION. By David Masters. (*John Lane.*) 6s. 6d.

The author of this work has delved among the personal records of the principal excavators of recent years, and from the odd scraps of "human interest" that are often contained in excavators' reports has composed a most moving picture of the excavator's life. It must be particularly moving to those excavators mentioned who are still alive, for it records so much that must be new to them. The pathetic picture of Sir Arthur Evans "unfolding his tent on the barren site of Knossos" (p. 184), and the way in which "the deeper he dug and the farther he went back the more artistic did the pottery become" (p. 176), may well move that famous excavator. No less stirred must Mme. Schliemann be when she reads (p. 170) of the enthusiasm with which she and her maid started digging on their own at Troy. Deep will be the emotion of all archaeologists when they read the following moving passage (p. 31): "It was but a Cretan pot in an Egyptian grave, but that little pot for a time made scholars wonder whether the civilization of Egypt was founded on a far older civilization which came from Crete."

Sterner emotions are, perhaps, roused by the inaccuracies with which

the book bristles. We are told (p. 189) that the great granary jars of Knossos are of *stone*, that Schliemann discovered seven cities at Hissarlik (p. 173), and the late and uninteresting relief from Hellenistic Ilium is, by inference, attributed to the fifth century B.C. (p. 177). Space alone prevents me from increasing the list.

Among the many evils which have resulted from the discovery of the tomb of Tutankhamen works such as this book are among the minor. The popularity of archaeology brings many camp-followers. Mr. John Lane has rightly appreciated the popular demand for light on archaeology, but he has given us the glare of the limelight instead of the clarifying light of the sun. Books of this type can be compiled, but they should only be compiled by archaeologists.

S. CASSON.

ORIENTALIA

THE RIGVEDA AND THE GROWTH OF RELIGIONS. "Vedic Hymns," translated from the Rigveda with introduction and notes by Edward J. Thomas, M.A., D.LITT. (*John Murray*.)

The volume entitled "Vedic Hymns" is a notable addition to "The Wisdom of the East" series, which has done so much to make the West understand the old world of thought. In this book the author has brought his scholarship and criticism to bear, not only on the main task of presenting "the Veda of verses" in a prose in which one can still catch the echoes of the ancient metres, but also on clarifying the numerous problems crystallized in the Rigveda. Indeed, the exceedingly able introduction which Dr. Thomas has contributed to the work will be regarded as a definite service to the cause of synthetic study.

He starts with the warning that the theory of evolution does not offer the key to any religion. The growth of religious and moral ideas obeys the natural laws of evolution and involution, and cannot be properly understood by the exclusive recognition of a single process. In his lecture on macrocosm, Vivekananda pointed out that each involution presupposed an evolution, and each evolution an involution. The Rigveda represents a certain stage, and neither the beginning nor the end of religious growth among the Aryans. As Dr. Thomas reminds us, both archaeology and linguistics establish the fact that there were earlier stages of human culture with forms of language far anterior to the formation of the Indo-European group. The hymns of the Rigveda are but an interlude between the primeval beliefs of those ages and the momentous developments that were to come from the Upanishads and the Dhammapada. In the very complexity of the material embodied in the first Veda, Dr. Thomas observes a wholesome safeguard against the tendency to be satisfied with a too simple *à priori* theory of the origin of religion.

The author holds that it is possible to trace the Vedic beliefs back to a pre-Indian age. The closeness between the Sanskrit of the Vedas and the ancient language of the Zoroastrians, as well as the fact that the two

peoples cherished certain concepts in common, leads to the Rigveda being considered as a development of Indo-Aryan thought and tradition.

But to the mind of the present writer the Rigveda holds within itself evidence of yet other influences. The Sanskrit of the first Veda is even more primitive than that of the succeeding Vedas. The appearance of the peculiar semi-vowel and of its aspirated form is quite peculiar to the Rigveda. It is difficult to ascertain whence this curious heavy sound found its way into the ancient book. Whitney has shown that the lingual element is not native to the language of the Aryans, and that the presence of the cerebral letters in a variety of Vedic words mark their non-Indo-European character. Is it not pertinent to enquire how far a people who permitted their language to imbibe foreign influences were still insular in regard to their religious beliefs and practices? After all, the race among whom the Rigveda sprung and flourished were as human as we are, and it is by no means derogatory to them to say that they were not only lenders but borrowers as well.

Dr. Thomas has performed his rôle of interpreter with a literary skill and independence of judgment worthy of a Western scholar. The little notes with which he introduces various hymns are full of interest and information. The Rigveda presents nature worship as a real living religion, and, as the author affirms, "no theory of the origin of religion can ignore it." Ancestor worship is also to be found among these hymns, but Dr. Thomas is careful enough to note that, as in ancient Greece so in India of the past, the worship of the dead and the deification of heroes were two distinct things.

The author discusses the relation of the Rigveda to mythology. He points out that mythology is "one of early man's attempts at natural science," and that it is an addition both to belief and ritual. "The Veda itself and the whole history of Indian religions show that mythology is not a permanent groundwork of belief, but that it is in constant evolution. In the Veda it develops on one hand into the philosophical hymns, which evidently finds the older myths inadequate, and in the popular religion it evolves a system of new gods and myths, in which the older deities are almost forgotten." Dr. Thomas traces in the Rigveda "a progress to monotheism, first in identifying one god with others, and finally expressed explicitly, not merely by the philosophers, but in the orthodox religious teaching."

An epoch-making step had yet to be taken. "It was in the Upanishads, the theological treatises appended to the Brâhmanas, that the doctrine of the absolute One was first definitely formulated." To Rabin-dranath Tagore and many other Indian thinkers the Upanishads represent the high-water mark of Indian philosophy. In the Rigveda we have the firstfruits of a culture that was to grow and to influence the thought of East and West alike.

P. C. TARAPORE.

MODERN INDIAN LITERATURE

(Reviewed by F. R. SCATCHERD.)

CASTE AND OUTCAST. By Dhan Gopal Mukerji. (*J. M. Dent and Sons, Ltd.*) 10s. 6d. net.

SUBLIME THOUGH BLIND. By M. M. Banaji. (14, New Tarachand Building, Hughes Road, Chowpatty, Bombay.) Rs. 8.

THE CAGE OF GOLD. By Sita Chatterji. (*R. Chatterji, Cornwallis Street, Calcutta.*) 4s.

HOME AND THE SCHOOL. By Professor M. M. Gidvani, M.A. (*Sunshine Publishing House, Bombay.*) 1s. 8d.

"Caste and Outcast" is a remarkable work, and admirably fulfils the intention of its author—that of removing prevalent misconceptions about India, especially as regards education and social and religious customs. Indian life, he explains, cannot be even moderately understood if its permanent background of religious thought be ignored.

"That is the difference between the point of view of the most humble Hindu and such a brilliant painter of Indian life as Mr. Rudyard Kipling. I use the word painter advisedly, for everything that the eye alone can take in that Mr. Kipling not only sees but completely conveys. No one, however, except a Hindu, to whom the religion of his country is more real than all its material aspects put together, can understand Indian life from within."

The most vivid impression, the earliest experience of his childhood, was the terrifying power of faces.

"From the day consciousness dawned upon me I saw faces, faces everywhere, and I always noticed the eyes. It was as if the whole Hindu race lived in its eyes. . . . The jungle is the next thing I remember. Our house was situated at the edge of the forest not far from the town. In the evenings, after the lights were out, we used to sit by the open window looking towards the forest. I remember one evening especially, though I must have been a very little child at the time. I was gazing into the darkness outside, when I saw something that appeared to me to be like a huge jewelled hand. This hand, with rings gleaming on all its fingers, was slowly coming towards me out of the jungle. The movement of the hand in the darkness was intense and terrifying. I cried with fright, and my mother, putting her arm around me, said: 'Fear not, little son. Those are only the eyes of the foxes and jackals and hundreds of other small jungle dwellers coming and going about their business.'"

Dhan Gopal Mukerji's descriptions of his home life—the life of a Hindu of Brahmin parentage—is most fascinating and instructive. His wonderful mother was, according to Indian tradition, an educated lady. Yet she could neither read nor write, and held the view that a woman who could count beyond a hundred "was too forward to be a lady." Here is one of her wise sayings :

"Don't you think an understanding heart knows, if not more, at least all that is in the printed page? The heart is the king who has all things, who knows all things. The head is only the palace. If your prince be dead, what good is the empty palace?"

She practised the principles of "Couléism," was an accomplished psycho-analyst, and had great healing power. When sick people were brought to her, she would place her hand on their foreheads and say, "It is not; it is not," and pray for them, teaching them to heal themselves. The appeal to the subconscious plays a great part in Hindu life. The mother will tell her four-year-old child to say to himself:

"You are brave, you are infinite. Nothing can be added to you, and nothing can be taken away from you. . . . He is taught that he must control the conscious and learn the art of the unconscious. . . . For the Indian splits the mind in two. The conscious mind takes coffee at eight, the train at nine, and runs through life making a terrible racket and calling it achievement. The unconscious mind is the eternal part of ourselves—the soul. The conscious is the thing that the unconscious has apparently created to do its work. . . . In India all the prayers, such as 'Lead me from the unreal to the real; from death into immortality,' or 'It was never born; it shall never die,' guide the conscious mind to a sense of immortality, which is inherent in the nature of the unconscious. Thus, in the course of such meditation, the conscious and the unconscious are merged into one. This is what is called the education of the real self; and it is surprising to find how much wisdom the Hindus have mastered, whose conscious minds have been so little instructed."

It must not be concluded, on account of the above excerpts, that the work is made up of philosophical abstractions and reflections. It is indeed singularly free from sententiousness and verbosity, defects frequently characteristic of modern Indian writings. The style is simple and direct. There is not a dull page throughout, and such chapters as "My Little Sister," "The Holy Man," and "Initiation" are veritable cameos of Indian life.

"Outcast," the second division of the book, deals with the writer's experiences in America, as "Caste" was devoted to his life in India (including a brief visit to Japan). It must be a bitter but salutary discipline for the philanthropists and social reformers of the New World to follow the devious wanderings of the artless Dhan as he fell into the hands of one exploiter after the other. He soon found that the veneer of Western civilization concealed a state of affairs no worse and no better than he had left in India. There were times when all life "seemed a wretched joke and every joke a sordid travesty."

As a washer of dishes and a maker of beds he worked his way through college, took his degree, and became a lecturer. "The Hindu," says Mr. Mukerji, "with his centuries of tradition, is attracted by America as by no other country." In Europe there is nothing outside of Greece that appeals to the heart of a Hindu. In the air of America he found the "sharp taste of freedom," not from politicians, not from economics, but from the dead. "No dead generations rock the cradle of the new-born here." In America, as in Asia, the outlook is anti-human. Life is cosmocentric, not homocentric, as in Europe. "Man is as he ought to be, an episode," a conscious or unconscious tool in the power of a force that compels him to will the race ideal and carry it forward through a cycle of materialistic culture. One can only hope that later experiences will modify the pessim-

ism engendered in his sensitive soul by the awful circumstances attending his sojourn in this American world, "fierce with homelessness," and that a later contact with its soil and people will give him a more hopeful view of the future of the world.

"Sublime though Blind," a tale of Parsi life, men, and manners, is a lengthy volume of five hundred and ten pages. If anyone be really anxious to get a practical insight into the average social and religious life of the Parsi community in Bombay, Mr. Banaji's novel will fulfil that purpose as well as any other work of the same kind. Mr. Banaji does not spare his community, and may thus render it a service that no outsider could equal; for such searching criticisms, from a writer of his sincerity, must cause every progressive member to do his best to remove the serious defects thus indicated. To take one instance only, the Parsis, writes Mr. Banaji, have made no effort to improve education. While other communities are establishing Universities, they have not even founded a public school on modern lines. They owe their present position to education and the enterprise of their ancestors. But to-day they hold aloof from identifying themselves with India, and refrain from enterprise beyond its borders. Thus the Parsis, out of touch with modern life, may one day "find themselves neither here nor there in the unfamiliar conditions of a renovated world."

"The Cage of Gold" is a family tale that throws an interesting light on the life of young people at home, at school, and at college. As with many other stories of Indian life, the boys stand out more definitely than the girls. Urmila, the heroine, is a rather shadowy character, who has always been obscured by stronger personalities. But she does at length assert herself, and leaves her golden cage for the joys of love and liberty.

"Home and the School" is a plea for "a peaceful revolt" against tyrant custom which, the writer declares, dominates all departments of Indian life. "Away with parent-craft, priestcraft, teacher-craft, and caste-craft is the burden of his message. The plight of Russia has evidently taught him nothing as to the dangers of ruthless iconoclasm. But he gets glimpses of the truth when he pleads for self-reform, home reform, and social reform:

"How Swaraj is going to reduce the pernicious dowry which embitters the life of millions, stop early marriage, which saps the life of the nation, improve the lot of . . . child widows . . . help the victims of caste tyranny out of their mortgage deeds, debts, litigation, starvation, and ruin, I fail to see. The fact is we want Swaraj of the individual in the first instance and Swaraj of the country after.

The story of the sufferings and death of Hari, the boy-victim to the "examination god," is told with understanding and sympathy, and the wholesale sacrifice of childhood to senseless routines is forcefully delineated.

POETRY

A MODERN EPIC POEM. By J. C. Johnston. *Percy Lund (Humphries and Co., Ltd., The Country Press, Bradford, and 3, Amen Corner, London, E.C. 4).* 31s. 6d. net.

(Reviewed by F. R. SCATCHERD.)

By far the most arresting and fundamental work of its kind that has appeared for many years is "The Book of the Beloved."

A prospectus, issued by the publishers, states that they considered the book to possess exceptional merit and inestimable value, but to reach those capable of appreciating its message would present considerable difficulty. It was therefore decided to issue a subscription form with a synopsis of the book, and an appreciation by W. L. Wilmshurst. The response justified the publisher's judgment, and proved that a feeling for the best and highest in literature is as characteristic of the human spirit to-day as ever it has been in the past.

In the closing paragraph of his preface the author tells us that there are three who are called Beloved—the Soul of Man, Christ, and God; that these three are the One Beloved, and that it is in their honour that he has written "The Book of the Beloved."

The work consists of some 275 poems of varying length and form, yet constituting a sequential whole of continuous interest. It falls into three parts: *The Book of the Garden*, describes the soul in its relations with the sense world; *The Book of Images*, the soul in relation with itself; *The Book of God* depicts the soul in its relation with the divine world.

Mr. J. A. Johnston, the author of the poem, is of Anglo-Indian stock on both sides, but although born in India, he has never set foot out of Europe, and very little out of England, since he came home at the age of seven.

Nevertheless, his love for the East is very keen, and his one wish is to see an understanding grow up between Europe and Asia, based not on tolerance, but on mutual friendship and esteem.

The effect produced on Indian minds by Mr. Johnston's Indian poems goes far to confirm their substantial accuracy, a point which for Europeans might otherwise remain open to doubt.

A Brahmin friend of the author's, a man learned in his own scriptures, and distinctly hostile to Western civilization and Western religion, after listening very quietly to a half-hour's reading, rose from his chair and seated himself cross-legged at the reader's feet.

Somewhat taken by surprise, Mr. Johnston asked him what he was doing. To Mr. Johnston's still greater amazement, the Brahmin replied: "Oh, I know my Master when I see him. You know far more of my religion than I do!"

Then turning to Mr. Johnston's friend and their joint host, he continued with embarrassing candour:

"These poems which Mr. Johnston has been reading to us to-night are full of allusions which he and I understand very well, but which you would not understand in a hundred years!"

Another Brahmin friend on another occasion sat thoughtfully and silently through a reading of "The Lily Temple of Benares." Asked how he liked it, he replied : " *That* is how we Hindus worship !"

I have dwelt on the above aspects of the poem as likely to be of interest to Eastern readers, but like all great writings its appeal is universal. Mr. Wilmshurst has no hesitation in comparing "The Book of the Beloved" to two supreme love poems, The Song of Songs and The Divine Comedy, which, like Mr. Johnston's poem, "is based upon a love story, beginning on earth, ending in heaven, and revealing the relationship between human and divine love."

From another point of view it may be regarded as a drama of initiation. To quote Mr. Wilmshurst again :

" 'The Book of the Beloved' is a unique memorial and a record of the depressions and exaltations, the derelictions and consolations, the blindings and the illuminations, experienced by the soul that, seeking to complete its evolution and destiny, climbs that mystical mountain upon the summit of which its life melts into Eternal Love."

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THE LEAGUE OF NATIONS ON INTELLECTUAL CO-OPERATION

By F. R. SCATCHERD

I. NEED FOR THE COMMITTEE ON INTELLECTUAL CO-OPERATION*

THE work of this Committee, up to the present, has mainly consisted in the formulation of the reasons justifying its existence and outlying its future activities.

From the beginning, the League has directed its attention to the need for international intellectual co-operation. M. Léon Bourgeois has declared that the study of the methods of accelerating the mutual exchange of ideas between nations should surely keep pace with the improvement in the exchange of material products, since "*without a spirit of mutual understanding between nations the League cannot live.*" (Italics are ours.)

Despite international contacts in such spheres as medicine and biology, the absence of a general scheme of international intellectual co-operation was seen to lead to confusion, and to the delay, often even to the arrest, of the progress of science. Also "post-war conditions accentuated the difficulties and brought new problems."

The first Assembly of the League of Nations (December, 1920) recommended the taking of all steps likely to facilitate the international organization of intellectual efforts. M. Léon Bourgeois was entrusted with the preparation of a report on how to effect the desired results. In order to avoid national antagonisms, he proposed the election of a committee of not more than twelve members, "composed of the persons best qualified to deal with matters of education and science."

Professor Gilbert Murray, in his report adopted by the Second Assembly of the League, wrote:

"The Committee realizes the great importance of the organization of intellectual work; it knows that the future of the League of Nations depends upon the formation of a universal conscience. This can only be created and developed if the scholars, the thinkers and the writers in all countries, maintain close mutual contact, and spread from one country to another the ideas which can ensure peace among the peoples, and if the efforts already made in this direction receive encouragement."

The creation of "National Committees for Intellectual Co-operation" has rapidly followed upon the first rudimentary organization of the Committee on Intellectual Co-operation, and thus the future seems well assured,

* "The League of Nations and Intellectual Co-operation. The Committee of Intellectual Co-operation. Minutes of the Third Session." League of Nations Secretariat, Geneva.

to judge by the activities already inaugurated and projected, into which space forbids further inquiry here.

II. SOME FRIENDLY CRITICISMS OF THE LEAGUE *

No friends of the League can afford to miss the articles by Mr. Victor Branford, especially the last. After enumerating its successes, he points out that the League works "within the boundary of conventional limitations"—i.e., in its noble Hygienic Section the official health standard can hardly be claimed as one of "radiant health of life at the full"; it is probably nearer that of "the anæmic townsman or the repressed countryman." So the "finance of the Economic Section is too much that of the cashier's balance sheet," unqualified by "vital requirements," "spiritual criteria," or "æsthetic values." And the same is true of the League's transport, judicial, and other activities. The Committee on Intellectual Co-operation does not escape. Its good-will is evident, but why does it, neglecting "psychological and sociological contacts and experiences," set about a bibliography of Chemical Research and of Classical Archæology?

"Was not the addiction to materialist and back-looking interests, at the expense of vital and fore-looking ones, a main cause of the drift of occidental civilization into that spiritual backwash from which the Great War emerged?"

III. TREMENDOUS DIFFICULTIES CONFRONTING THE LEAGUE

Apart from adjustments to ensure the smoother working of the present system, Mr. Branford points out the tremendous difficulties that confront the League, the "larger problem being nothing less than the remaking of our Western civilization." Mr. Branford will deal with that question in his own way in a future paper for the *Sociological Review*. Meanwhile, certain fundamental facts present themselves.

IV. THE LAW OF CONCORD IN NATURE

The most common objection urged against the League of Nations and its ideals is, that the whole conception of securing concord, by peaceful means, between warring nations and races is against nature.

It is only too true that, owing to a misreading of the facts of life, and under the influence of irresponsibility, numbers of scientific men still cling to the views that depend upon the conception of nature as "red in tooth and claw." They kick against the idea that law and order, not strife and anarchy, are the golden rule of successful life even on the lowliest planes of existence; that in the long run, as the ancient thinkers put it, nature never says one thing and wisdom another.

It is evident, on all hands, that a revolution in biological thought is taking place. Writer after writer, in the leading scientific journals, tells us

* By Victor Branford, the *Sociological Review*, January, 1924, in continuation of articles in the *Sociological Review* of April, July, and October, 1923.

that current biological philosophy is in an unsatisfactory state. Eminent biologists have to plead ignorance as to the method of evolution,

"and have not attained to clearness with regard to the origin of species; *we are not even sure of what species mean.*" (Italics are ours.)*

Nor can there be any reasonable doubt that both in general biology and in physiology co-operation, rather than competition, is seen to loom larger and larger every day.

To quote again from "The New Biology," Professor Thomson declares that:

"It is characteristic of the new biology that it has set the idea of the correlation of organisms in the centre of its thinking."

Is not this exactly what the author of "Symbiosis"* and other students of his school have been endeavouring to bring before the public for some years—i.e., *that progressive evolution is fundamentally due to the genius of organic life for mutual accommodation*—to co-operation instead of warfare between natural species?

These pioneers of the new biology have shown by irrefutable facts that contrary to the generally accepted views there is morality in nature: that the idea "nothing matters but success" is as false in the animal and even vegetable kingdoms as in the human world, that in all realms morality alone has inherent permanence, that immorality is essentially self-destructive.

V. NATURALISTS RALLYING TO THE SUPPORT OF CO-OPERATION IN NATURE

These views as to the fundamental concord and harmony in nature are daily gaining the support of naturalists, who are bringing forward corroborative evidence in their writings and lectures all over the world.

Mr. Richard Morse, editor of the delightful little "Country Life Diary," points out that the author of "Symbiosis"

"has done more than anyone else to elucidate the true meaning and scope of the symbiotic relationship in nature."

Believers in the inherent non-morality of nature and in evolution by mutual plunder and one-sided exploitation have never realized how largely the countryside is indebted to symbiosis, particularly to the pact of partnership between the animal and the plant. Concrete examples can be selected almost at random.

For instance, contrary to the belief that mammals are backward in symbiotic relationships, it has been shown that the regeneration of forests is largely due to mammals, principally rodents. These are in the habit of burying nuts and cones, many of which they do not consume, and this

* "The New Biology." By J. Arthur Thomson, F.R.S., *Quarterly Review*, October, 1923.

* "Symbiosis," by H. Reinheimer, 106, King Charles' Road, Surbiton. 15s. net.

leads to the distribution of seeds in appropriate localities. Such silent benefits far outweigh the damage they otherwise do to the forest.

The value of, and the need for, symbiosis between the human and vegetable kingdoms is strikingly illustrated by a brilliant paper on "Forests and Fertility."* Colonel Haig, the writer, points out that the inconsiderate destruction of trees by man has been attended by baneful effects on the climate and the resources of the region in which he lives. Where mountains and uplands have been denuded of their forests, the results have been destructive floods in the rainy season and shrivelled up rivers in the dry. Subsequently, as stated by Colonel Haig :

"It usually happens that when a country is deforested, goats and camels are turned on to the land. Any live roots are speedily grazed out of existence, seedlings are destroyed, and the humus pulverized and scattered. Then the replanting is a difficult and expensive job."

This is the reverse side of the picture, since in symbiotic relations, normally reciprocal, there is always the possibility of a partner playing traitor by taking undue advantage of a favourable situation. The species habitually addicted to such felonious habits have been denominated "plant-assassins" by Mr. Reinheimer. The term "plant-assassins" has been derided by some few biologists, prominent among whom is the gifted Mr. Julian S. Huxley, but it must not be forgotten that "the concept of symbiosis itself was at first received with indignant scorn,"† although it is no longer possible to do so to-day.

Strange to say, the appropriateness of the term "plant-assassins" was forcibly brought home to the public quite recently when Mr. R. St. Barbe Baker, the founder of "The Forest Scout" movement of Kenya, reported the case of the Kikuyu tribe, which had actually got the name of the "forest-destroyers."

"Whenever they wanted to make a fresh cultivation, they went into the virgin forest, cut down and burned off the trees, and then planted their seeds. They would stay here until they had reaped two crops, and then they would abandon the old cultivation and proceed to take up more land, until the whole countryside was becoming denuded of trees"

with the usual calamitous results.

Now, under the guidance of Mr. Baker, a movement called "The Men of the Trees" has been founded, consisting of thousands of West African negroes.

"Two years ago they were destroying the forests at an appalling rate. To-day they are protecting them with all the stubborn determination of their race, and, what is more, these unlettered savages have actually started a system of afforestation without costing the Government one penny in wages or payment."‡

* "Forests and Fertility," by Colonel H. de H. Haig. *Discovery*, May, 1923.

† "Symbiosis and the Struggle for Existence," by H. Reinheimer, *Fortnightly Review*, October, 1923.

‡ The *Daily News*, February 7, 1924.

The Forest Scout movement, as the *Daily News* stated in its leader, is an important contribution to the Empire, and nothing could be more deplorable than the fact that the economy axe has removed Mr. Baker from his post as Assistant Conservator of Forests, thus bringing this promising movement to a halt.

It is to be hoped that, as a result of the *Daily News* protest, Mr. Baker has been permitted to return to Africa to carry on his beneficent work.

But enough has been said to show that the hasty condemnation of the ideals of the League of Nations on the grounds of their alleged lack of sanction by nature, has no foundation or justification in the light of the new truths that science is daily bringing to our knowledge.

VI. HUMANITARIAN ACTIVITIES OF THE LEAGUE.

These are multifarious, and beyond all present estimate in their ultimate fruitfulness and use. For example, since leaving London last October, Dr. Platon Drakoules has spent a strenuous time in the study of town-planning, garden city, and housing activities in the principal European centres, with a view to influence the housing of the Near Eastern refugees along humane and advanced lines.

During a recent visit to Salonica, Dr. Drakoules secured the support of the Governor-General, of the Director of Colonization, and also of *Colonel Treloar, the Commissioner of the League of Nations*, in his efforts to spread a knowledge of garden city principles.

On March 9, Dr. Drakoules lectured to a large audience at Salonica, showing slides of Letchworth, Welwyn, German and Austrian *siedlungen*, and Dutch and American settlements, with the result that the authorities promised him a grant of the land necessary to build a model town according to the principles expounded.

On March 11, a number of leading men and women met at the Hotel Majestic to discuss plans for future activity, and it was decided to form an association with the following objects :

1. Propaganda.
2. Securing the fulfilment of the above-mentioned promise as to the grant of land.
3. Promoting the erection of garden cities and *siedlungen* in Macedonia and Thrace.
4. Influencing the building and town-planning in Macedonia towards a garden city type.

Writing on March 12, Dr. Drakoules expressed his intention of returning straight to Athens, there to continue his lectures and to form another similar association.

Meanwhile, the Salonica association must proceed to obtain legal recognition—a formal requirement. But before this can be done the statutes must be submitted to the Governor-General of Salonica. Dr. Drakoules has been entrusted with the task of drafting these statutes, and it is hoped that he will be able to represent the new association at the Amsterdam International Town-planning Congress, if there is time for the necessary formalities to be complied with.

THE ASIATIC REVIEW

JULY, 1924

THE LEE COMMISSION REPORT

BY THE RIGHT HON. EARL WINTERTON, M.P.

ENTRUSTED by the Editor of the ASIATIC REVIEW with the task of reviewing the report of the Royal Commission on the Superior Civil Services in India for readers who are in the main expert students of Indian affairs, one should, I think, begin by considering the real nature of the problem to be solved; the essence of it has become obscured in the mass of divergent criticism to which, for its treatment of service matters, the Government of India and the India Office has been subjected in recent years. One lot of critics, to be found largely among the contributors to and readers of certain periodicals at home, find in every difficulty of administration that arises, a fresh argument against the "Montford" Act. "Abolish the Act" is, in effect, what they say, "and return to a pre-Montagu régime, and you will solve your difficulties. Continue it, and you will very soon have complete chaos." One can dispose of this line of reasoning by saying that it is rejected, almost without exception, by every responsible official in India. Few, indeed, even of those who are retiring on proportionate pensions because they feel they cannot work under the new conditions, would put forward such a solution.

In the other camp of critics are to be found a very large number of Indians, and many Europeans, both officials and non-officials, some of whom it is surprising to find there. Their solution of the question is as simple and as dangerous as that of the opponents, root and branch, of the Act. They would meet difficulties, especially racial ones, by sweeping away all the safeguards laid down in the

Act for the first decennial period: "Indianize, and again Indianize," is their cry. Never mind whether or not you have sufficient Indians fit and ready to take the place of Europeans at present in the service. The great thing is to show that you really mean business, and you can only do it by giving Indians everything for which they ask, in the way of posts, at once. Thus alone can you sweeten the service of such Europeans who still remain by giving them willing Indian comrades from whom a sense of grievance has been removed. This solution, of course, takes no heed of service efficiency; it is based frankly on political expediency, and that of the most doubtful kind. Fortunately, though accelerated Indianization is advocated, the Commission definitely set its face against such a counsel of despair. The Report discusses faster Indianization of the services on the basis of how much further it is reasonably safe to go, and not on the basis of how much opposition can be bought off by a complete yielding to political pressure. Surely the main service problem is a comparatively simple one, however difficult its solution may be. Yet it is seldom stated in clear terms, which is my excuse for attempting to do so here. The Warrant of Appointment of the Royal Commission contained the words, "The necessity of maintaining a standard of administration in conformity with the responsibilities of the Crown for the government of India, and the declared policy of Parliament in respect of the increasing association of Indians in every branch of the administration." Both now and in the future, we have to determine how to carry out the increasing association of Indians with the administration of their own country on steady and progressive lines, and to aim at a reasonable standard of honesty and efficiency amongst them, whilst at the same time securing to the European members of the services such pay, prospects, and conditions as will retain those at present in the services, produce a sufficiency of recruits, and bring out in both alike those working qualities that are begotten of contentment and confidence.

Having thus stated the problem, let me proceed to examine the Indianization side of it. It is best to state one's views frankly even if they are unacceptable to many readers of the *ASIATIC REVIEW*. The reason why many British members of the Service feel they cannot work under Indians—at any rate, to the extent which they expect they would have to do in a few years time, and why therefore they are leaving the Service—is not because they have racial objections to Indians on the score of their intelligence or the pigmentation of their skin, but because they do not believe that any Asiatics can ever attain to the high standard of efficiency to be found in the old Civil Services in India. The question merits fuller consideration than it has yet received in public discussion. Having both travelled and soldiered in the East, I am not, of course, ignorant of the fact that Asiatic efficiency is, as a whole, infinitely below that of this country, though hardly worse than it is in some European countries. On the other hand, many of the British critics of Asiatic ethics ignore the state of affairs to be found in parts of the world mainly inhabited by people of Nordic descent. Recent events in Washington and Newfoundland give ground for unpleasant reflections, as does first-hand experience of the methods of government in many Trans-atlantic towns and in some states and provinces as well. It is doubtful, too, if the worst-managed Indian municipality would suffer by comparison with local government as practised in Poplar. Of course, it is undeniable that nowhere in the world is there a higher standard of conduct and fitness for their office than is to be found in the British Civil Service and the Europeans in the Indian Services. It is impeccable and unimpeachable, and no more fatuous line of argument has ever been taken than that of certain Indian extremists who claim that British Civil Servants in India are shameless alien exploiters of a suffering people. But after all, that high standard is a comparatively modern growth. It scarcely existed among the British in India in the eighteenth

century ; it was not known in Great Britain until well on in the nineteenth century.

The Commissioners, of course, could not discuss this side of the problem with the same frankness as I have done. But behind their conclusions both on Indianization and the inter-relationship of the two races in the Services, is, unquestionably, the conviction that the real desideratum is the maintenance of the old high standard among Indians and Europeans alike. At the same time, they appreciate the difficulties involved in a continued transference of power to Indians, and the acceleration of the process which the Indianization and Provincialization proposals necessitate. Underlying it all is the hope, implied—though not, I think, stated in so many words (except in Professor Coupland's Minute)—that the same gradual growth of higher ideals will take place among Indian officials as we have seen in the course of the last 100 years in our own country. The admirable spirit displayed by many Indians in the Civil Service to-day gives great confidence for the future.

Admittedly, the Report must be accepted or rejected as a whole. It is, in no ordinary degree, a composite and neatly-balanced one. Personally, even were I not anxious to see its other conclusions, such as those on pay and pensions adopted, I should have more hesitation in accepting the Indianization and Provincialization proposals were it not for the character of the personnel of the Commission. All of them are men who inspire confidence ; let us take the case of only one member, Sir Reginald Craddock, who contributes an admirable minute of his own to explain his reasons for signing the Report. Emerging from a recent well-earned retirement (after an honourable record of service in high office in India and Burma) to serve on the the Commission, he is not one of those "tame officials with an eye to promotion" whom opponents of the Montford Act allege were Mr. Montagu's only supporters at the time. Sir Reginald had nothing, in a material sense, to

lose or gain by signing the Report, even if such a consideration affected him, which of course it would not, and so far as I remember reading from the published papers of the views of Provincial Governors in 1919, Sir Reginald expressed by no means unqualified belief in the Montford scheme. The fact that he is in favour of the Indianization and Provincialization proposals of the Report is very important.

To sum up my opinion on these proposals, I consider that, based as they are on well-thought-out ideas, which go deeper, I think, than the Report actually states, they can and should be accepted. If I thought that they were brought forward merely as a sop to the Extremist Cerberus without any real conviction, I should oppose them. There is, however, no evidence to that effect in the Report. Nor do I believe, as I have already stated, that the Commissioners favour the view of those who advocate increased Indianization because in it is found the line of least resistance. As I see them the proposals are put forward on quite other grounds. If I am wrong, a heavy responsibility indeed rests on the Commissioners.

I come now to the proposals for the improvement of pay, pensions, and emoluments, which mainly, though not entirely, concern the British side of the Service. First of all, however, I shall attempt to re-answer two questions which were often put to me when I was Under-Secretary for India, and are still being asked to-day.

The first of these is why it was necessary to have a Royal Commission at all before making such improvements in financial conditions as admittedly the British members of the services are entitled to have. The answer is a two-fold one. On the one hand, the improvement of existing conditions for British Civil Servants in India is inextricably mixed up with other questions discussed in the Report, and, on the other hand, both present and potential members of those services want, not merely a better financial position, but a more assured present and future generally. They

want to know where they stand. They require a less hurried and more precise definition of their position in the new era than was possible when the Act was passed. Nothing but a Royal Commission could do this for them. The Report of the Islington Commission is out of date; a Committee of Enquiry by the Government of India would have inspired no confidence; a declaration by the Secretary of State would have had only ephemeral importance; what was required was the considered opinion of an impartial Commission; the fact that that Commission is unanimous is a strong justification of the action taken. There may be some among readers of the *ASIATIC REVIEW* will dispute the truth of the first part of my answer, and will retain the opinion (ignoring the difficulties of such a course) that a simple Executive Act was all that was required; none, I think, however, will differ with the second part.

The other question concerns the position of the existing provincial services; it is asked why their grievances, disabilities, and doubts were not brought definitely within the purview of the Commission. Clearly, however, the Secretary of State and Parliament stand in a far less direct relationship to them than to the superior Civil Services, though I should be the last to deny that they have a moral responsibility for those at any rate who joined before the Montford Act. There is, however, nothing to prevent their position and difficulties being fully considered, and improvements effected simultaneously with the putting into operation of the new provisions for the superior Services. Indeed, it seems to me most important to regularize the position of all Europeans in the public services in India. I use the term regularize advisedly because, as the Report shows, the position of certain gentlemen who have been serving on special short-term contracts has been both undefined and insecure. Put in a nutshell, every British-born man and woman leaving these shores in future for

service under the Crown in India must be clearly informed under what conditions their working life will be spent so far as it is within the power of the Secretary of State and Government in India to tell them.

Obviously, in an India changing from year to year, it is harder to do this than in the past, but the Report shows that much can be done which is not done to-day. The formation of a Public Services Commission (especially if its functions are extended to embrace all services as tentatively suggested in par. 30 of chap. v.), the passage of Public Service Acts, the proposed new pensions rates, and legal covenant should cumulatively effect a vast improvement. Having referred to the Public Services Commission, it is convenient to deal with it at this point. Everything seems to me to depend upon its composition. If its first membership is such as to inspire confidence in the Services, it will be a very valuable body indeed, and will take the place of the impartial tribunal which the Government of India was once considered to be by Civil Servants, but which rightly or wrongly it is not so considered to-day. In that lies the crux of the question. Rightly exercised, its functions should be most beneficial to Indians and Europeans alike.

I return to the question of pay, pensions, and prospects for the superior Services. The Commission went fully into the first two, but could only deal to a slight extent with the third, interlaced as it is with matters of policy and the future intentions of Parliament with which they were not competent to deal.

The improvements suggested are not the maximum that could justly have been accorded, but are considerably better than the minimum which might have been given. Are they sufficient to produce recruits for the Services from this country of the right quality in future?

Taken by themselves they probably are. But I have already said that the difficulties alike of retaining existing British Civil Servants and of obtaining recruits are partly financial and partly due to fear or dislike of present-day

conditions in India. That is indisputable, but is very hard confidently to decide which is the greater difficulty. I had during my two years of office many frank and confidential talks with Civil Servants of all grades, both Indian and British, here and in India, but found nothing like a consensus of opinion one way or the other. That hard work, difficult conditions, and indifferent pay do not of themselves act as a deterrent to Civil Service overseas is proved by the case of Africa. There is, I believe, no difficulty in getting recruits for service in Uganda, Kenya, the Soudan, or in others of our fast expanding African administrative areas. Business and sport happens to have taken me to different parts of Africa on several occasions. I have been the guest, out in the Bush, of Civil Servants, in the Soudan, Kenya, and Northern Rhodesia. I can scarcely conceive a harder life than that led, say, by a British member of the Soudan Civil Service in the Equatorial Provinces: heat, mosquitoes, and risk of fever all the year round, with no real cold season, with fewer British neighbours than are to be found in most up-country districts in India, and a turbulent population to control. Spending, as I once did when recovering from fever, a week or ten days on the verandah of the house of a Provincial Governor* in the Southern Soudan, I had ample opportunity of observing the daily flow of grievances, petitions, and malefactors from an African Province to its principal officer, unaided by a British assistant. It is hard to conceive that even in India, under similar conditions, the procession in question could have been greater or its component parts more vociferous. Yet there are no lack of recruits for the Soudan Civil Service.

Of course there is a striking difference between service in a territory like the Soudan, where the European has virtually undisputed authority, and similar service under the new duo-racial system in India. All the same, the

* The office roughly corresponds to that of a District Commissioner in India.

comparison, to the disadvantage of service in India, might be stressed too far; for the difficulties of the British Administrative Official in the many territories in Africa, where there are the conflicting claims of European settlers, African natives, and Indian traders constantly to be adjusted and a Legislative Assembly (not widely different from its counterpart in India) to be considered, are of exactly that harassing kind which are said to make present-day service so unpopular in India.

I myself believe that if the emoluments of the Services are put on a reasonably good level, instead of on the present miserably low one, the right class of recruits from the Universities of this country will again come forward. It must be remembered how small are the entrances to a livelihood open to the successful University man in the present time of world-wide trade depression; and though no one wishes to see men go into the Indian Civil Services because there is nothing else for them to do, it is legitimate to emphasize the fact that the war has made life in every profession harder than easier. Look, for example, at the terrific strain to which the staff in the higher positions of a British Government Office are put to-day, compared with their predecessors of the eighties and nineties.

It is encouraging to read that the Commission found far more contentment with present-day conditions in India among the younger British officials than among their elders. My experience, when in India in 1922, coincided with that of the Commissioners. The reason is not far to seek. The majority of recruits since the war have been ex-Service men with fine records of combatant service behind them. Those who were in the front line in any area of the war and emerged sound in mind and body at least have learned that no difficulty is insurmountable and no situation impossible to face. The most harassing uncertainties of life in time of peace are small compared with that of the trenches.

Add to this experience the ordinary adaptability of youth,

and you have the finest possible British material for helping India over the transition stage.

If the proposals are to effect their purpose, the sooner they are put into operation the better, and the Commissioners themselves lay stress on this with marked emphasis at the conclusion of their recommendations. If it is the fact, as would appear from a published account of recent proceedings in the Assembly, that the Secretary of State, contrary to the impression which he gave in a recent debate, has decided to postpone any action upon the Report until the autumn, he is making a grave mistake, calculated to encourage the maximum of manufactured opposition by those who dislike the Report because they dislike good Government and a contented Civil Service. The Report should be dealt with as a whole at once.

In conclusion, I would observe that, whilst I believe the conclusions in the Report will greatly help the solution of the particular problems which the Commissioners were asked to solve, it cannot solve the larger problem of governance in India. That problem, which I have attempted to deal with both in speeches and writings elsewhere, is how far Parliament has the power, and how far the limited class of Indians who are in public service and public life in India to-day have the will to devolve political rights and responsibilities upon the great mass of the population in India. Under present conditions a transference of legislative and administrative functions from Europeans to Indians, right and proper as it is, will not by itself achieve this, which should be the real aim of practical statesmanship in the Indian Empire.

THE NEW EAST

CHINESE TURKESTAN

BY LIEUT.-COLONEL P. T. EThERTON

(*H.M. Consul-General in Chinese Turkestan*)

PRIOR to the war it was an accepted probability of political and economic development that the greater part of Central Asia, including, of course, Chinese Turkestan, would pass into the hands of Russia, who was then a powerful colonizing force in Asia. That has been averted for the moment, but it is not possible to predict what may happen in the future in the evolution of Central Asia, when we contemplate the creation of new and independent States that has been going on since the Armistice, coupled with the advent of Afghanistan as a Muslim Power imbued with progressive ideas.

Chinese Turkestan is divided geographically and politically into two areas of which the Thian Shan Mountains are the line of demarcation, that part lying south of the range being most important both from its political and economic aspect. Owing to the recent revolt in Mongolia and the occupation of Kobdo by the Mongol forces, the composition of the province has of necessity undergone a change, and Kobdo and part of the Altai have passed, temporarily at any rate, out of Chinese occupation. Steps were taken by the provincial authorities to re-establish control there, but these have not yet assumed definite shape, and in the meantime the Mongols appear to be consolidating their hold upon the disputed territory.

The boundary of Chinese Turkestan on the north and north-east is Mongolia, on the east Kansu, on the south and south-east Tibet and India, and on the south-west, west, and north-west the Pamirs, Ferghana, and Semirechia. The total area as at present comprised is about 445,000

square miles, and it forms the consular district of the New Dominion and Kobdo.

Kashgaria comprises the most important oasis in Chinese Turkestan, and Kashgar itself is, from our point of view, the political hub, although commercially it is easily surpassed by Yarkand, the latter place being the great trade emporium for India and adjacent countries. Before dealing with the political aspect and importance of Kashgar I propose to give a brief history of it, with special reference to Yakub Beg, whose rise to power in Chinese Turkestan during the sixties of last century, and the influence he exerted upon the country, form one of the most romantic pages in Central Asian history.

Prior to the Russian advance many wars and revolutions had disturbed the peace and prosperity of Central Asia, whilst the adjacent province of Ferghana in Russian Turkestan was the scene of desperate warfare against the Russians. At the same time a rising amongst the Muhammadans in Western China broke out, the infection of which rapidly spread to Kashgaria, where the population is 94 per cent. Muhammadan. The Chinese were overwhelmed, the Muhammadan star seemed in the ascendant, but internecine warfare ensued, and the resultant anarchy and chaos had a far-reaching effect upon the history of Kashgar.

In those stormy days we were apprehensive of Russian designs, and of her steady and irresistible advance in Central Asia and consolidation of power along the frontiers of Afghanistan. It was, therefore, decided to conclude an agreement with Yakub Beg, who, after a few years' campaigning, had brought all Southern Chinese Turkestan under his control. Moreover, he had acquired such a commanding position that the British Government determined to despatch a diplomatic and commercial mission to the new ruler whose activities had brought him into the arena of Asian politics, and made him a power to be reckoned with along the northern frontier of India.

The embassy in question left India in 1873, being headed by Mr. Douglas Forsyth, who was subsequently knighted for his services, and numbered among its members Surgeon-Captain Bellew, a consummate scholar in the languages and lore of the Afghan borders.

The treaty agreed upon was never concluded, for Yakub Beg was compelled by the advance of the Chinese to hasten eastwards and meet the avenging force which had set out from Peking to recover the lost province.

With the fall of Yakub Beg the Chinese strengthened their hold upon the country, and, having recognized that the main feature in the rebellion had been the mobility of Yakub Beg's forces, they practically denuded the province of horses, and deprived the people of their one great asset.

They also reversed their usual policy of vengeance and repression; the inhabitants were well treated, the rights to property and land respected, and a spirit of peace and contentment amongst the people was inaugurated. To their restraint at this period has been mainly due the peaceful and undisturbed possession which they have enjoyed in Turkestan since that time.

The bulk of the people of Chinese Turkestan are Turkis—a mixture of the original Iranian inhabitants of Central Asia, the Tajiks, with their Turanian conquerors, the Usbeks. The Turkis are engaged chiefly in agriculture and commerce, and are Muhammadans of the Sunni order, many of them belonging to the Sufi sect. Sart is the Russian name for the Turki-speaking urban population of Central Asia, but it has no ethnographical significance.

The almost universal religion is Muhammadanism, its adherents being mainly of the Sunni sect and of the Hanifite rite. Despite their protestations of piety it cannot be said that they collectively show strict adherence to the Quran and to Sunni precepts, although there are various orders and saints who are to some extent revered. Religious feeling in Chinese Turkestan does not play the cultural rôle which it did when Muhammadanism was first

introduced as a rival to Buddhist influence, and the local animistic religion. At that time, under the direction of Iranian culture, Muhammadanism meant the development of science and art, literature, and architecture, but their present theologians have eliminated from the religion everything which is at variance with conservatism and the Muslim written law, the Shariat. Although Islam was brought into Turkestan in the tenth century it did not spread among the masses until four hundred years later, and it is known that in the twelfth and thirteenth centuries Christianity, especially Nestorian Christianity, was a strong rival of Islam throughout Central Asia.

The general lack of education in Chinese Turkestan is everywhere apparent. Even in more flourishing times the people were never remarkable for intelligence. The various countries of Asia, such as Arabia, Persia, and India, have produced warriors, poets, and savants, and even from among the nomad Mongols great conquerors have arisen, but nothing intellectual has come out of Chinese Turkestan, on whose people is settled an ignorance and lack of everything ideal. The Turkis show no tendency towards advancement either educationally or in any other sense. They rest content in their present condition, and exhibit no desire to improve it.

In 1913, Chinese Turkestan was definitely constituted as a separate province, with headquarters at Urumchi, and its control was vested in a governor who is nominally responsible to the Central Government in Peking. It is divided into six circuits, each presided over by an intendant or Taoyin, who is the administrator thereof, and supervises the Customs, and the collection and transmission of revenue. The Taoyin is the important official from our point of view, for he is the pivot on which all business outside the territorial administration turns. Formerly the intendants were appointed from Peking on the recommendation of the Viceroy, but this prerogative is now exercised by the Governor. There are forty-seven districts in the province,

each in charge of a magistrate, known locally as an "Amban," and who resembles a collector, or district official, in India. The title represents but inadequately his numerous functions, which are educational, judicial, fiscal, and all that pertains to an executive. He is the one official who comes into direct contact with the people, and as the family was the unit of the Chinese nation under the Imperial régime, so may the district be considered the unit of the system under the present administration.

The districts are subdivided into areas, each controlled by a Beg, known as a Ming Bashi, or head of one thousand households; a Yuz Bashi, or head of one hundred households; and an Oan Bashi, or head of ten households, each according to the size and importance of the particular area. To all intents and purposes these Begs control the country; many of them have a good knowledge of Chinese, and each official has one or more attached to his personal staff as interpreter and the go-between in his dealings with the people. The officials do not learn the language, are unacquainted with the manners and customs of the Turkis, and consequently lack that sense of local touch and sympathy so essential to the successful government of Oriental races. The Beg, therefore, acquires a strong position, and the success of an applicant for justice, or for a favour of any kind, seems to depend upon the amount of silver dust cast in the eyes of that official.

Formerly the higher ranks of the civil service were filled by competitive examination, this system forming a leading feature of Chinese polity. No part of the administration was so carefully organized, and the prize of a literary degree was at once a distinction and a passport to civil appointment.

Whatever may have been the demerits of the system, it at least assured that an official should be a scholar in style and penmanship. Strange as it may seem, a Chinese official is far more influenced by the manner in which a case is presented than in the merits of the case itself, and

an indifferently worded letter or despatch at once prejudices the recipient against the writer, so high is the standard of literary appraisal.

The revolution of 1912, and the transfer from a monarchical to a republican form of government, brought in a lower class of men who secure their positions by purchase and by ingratiating themselves with the Governor at Uramchi. The result has been to lower the standard of general capability and integrity, and many of the precautions formerly in vogue to obviate malfeasance have been swept away. For instance, the term of office in one post was limited to three years, but there are several now serving in Turkestan who have been upwards of six years in their present posts. Further, no official could hold office in the province of his birth. By such means it was sought to guard against local interests growing up to compete with duty, and especially against territorial attachment which might become the basis of disloyalty. Obviously the system had serious drawbacks, for it is the absence of local and territorial attachment that encourages some of the worst official abuses. Neither in such a short term of office is an official likely to interest himself in, still less to spend money on, local improvements in a place which may know him no more during his career.

AMERICA, JAPAN, AND THE NEW IMMIGRATION LAW

BY BRIGADIER-GENERAL C. D. BRUCE, C.B.E.

"Neither America nor Japan wants war, either over the Californian question or Shantung or Manchuria, but in both countries there are elements at work whose active propaganda tends to produce increasing irritation, and to create in the public mind a belief that sooner or later war is inevitable."*

It will indeed be the irony of fate if the nation to whose initiative was due the one concrete effort to produce peace by reducing armaments should be the nation to postpone for at least another generation any hope of permanent peace in the Far East.

Yet America's action over the New Immigration Law can have no other effect.

By this it is not suggested that war in the Pacific is imminent, but that any faint hope which still existed of the permanency of the work done at the Washington Conference has been blown away like sea mist on a summer morning.

In passing the New Immigration Law no one can question America's right to do so, nor suggest that America is to blame. In discussing so delicate a question as that of race-equality it is imperative that one should first clear one's mind of any suspicion of bias: take neither side, judge dispassionately, and in so doing give equal prominence to all the points of a most contentious problem.

Any question becomes politically dangerous when it involves the self-respect of a proud and sensitive people as are the Japanese. When also the question is of such national importance as to unite as one man otherwise irreconcilable parties in the body politic, no other nation can in these days of rapid inter-communication pretend to be indifferent: particularly we who are faced with identically the same problem in Australia and elsewhere.

* J. O. P. Bland in "China, Japan, and Korea."

At the time when invitations to the Washington Conference were being issued by the United States Government, the Mikado's Ministers were anxious to place in the forefront of the programme the question of race-equality and of immigration. In accepting the invitation Japan thought fit to observe that there were two coasts to the Pacific Ocean. If, as was proposed at the Conference, questions concerning the Western coast were to be the subject of discussion, it appeared to Japan only right that questions concerning the East coast—that of the American Pacific States—should also be placed upon any agenda, and that sore-points such as Japanese immigration to America and Australia should not be forgotten.

In the very delicate position in which Japan found herself at Washington, she submitted with wise discretion to these questions being ruled out. In the eyes of the world—to some extent—Japan stood at the bar of an international tribunal where she risked figuring as the accused person. Confronted by rivals who were more or less banded together against her, particularly on the very question Japan had most at heart, her Elder Statesmen once more showed their wise discrimination of the apposite moment by refraining from bringing up the question of racial-equality. But the gulf was widening.

Nor should what happened at Versailles be forgotten.

The great war ended, Japan stood at what may well be the pinnacle of her career. Not only was her position as a world-power ensured, but she was recognized as one of the "Big Five" in whose hands rested, for the time being, the destinies of Europe. During the conferences in Paris, Baron Makino, one of Japan's representatives, brought up the question of the equality of races, only to receive a severe shock at the intransigences of the late President Wilson and the delegates of the British Dominions. Painful as this slap in the face must have been to Japanese national pride, it was not allowed to interfere—outwardly—with Allied harmony; nor to raise yet one more hopeless point

of disagreement between the "Big Five." But it is not in the nature of the Japanese to lightly forget such incidents.

Now, for the third time, in the face of the world, Japanese immigration into "White" countries has been definitely, and to every Japanese mind with brutal bluntness, ruled out.

The Japanese, one must repeat, a proud and highly civilized nation, are apparently once and for all, so far as America is concerned, to be lumped in the same scale of non-civilization as the blacks of Central Africa.

In the year 1907 what is known as the Root-Takahira Agreement, more usually referred to as the "Gentlemen's Agreement," was entered into between America and Japan. Under this agreement the Government of the Mikado recognized the position of Japanese immigration into America as on the same footing as she herself takes up with regard to Chinese and Korean immigration into Japan. Since the "Gentlemen's Agreement" came into force, feeling on the question of Japanese immigration into America has in both countries been kept more or less underground. By this agreement Japan voluntarily restricted her immigration into the United States. She has kept the agreement scrupulously.

Now, by a *viva-voce* vote, with hardly a protest, the American Senate has adopted, on April 15 last, an amendment to the Immigration Bill totally excluding Japanese from entering America. A few exceptions were made with regard to certain professional classes—Ministers, members of learned professions and arts, students. As soon as the Immigration Bill becomes law the "Gentlemen's Agreement" lapses. Nor is this all. A further step may be taken by America. Should this step be taken, and its possibility is causing great unrest in Japan, it will mean legislation under which amendment of the Constitution takes place prohibiting American-born children of Japanese parents—a Japanese father and an American mother—from claiming American citizenship.

Placed in an extremely awkward predicament President Coolidge has done what was within his power to allay the bitter feeling brought about by the Senate's hasty action. But he is reported as in favour of Japanese exclusion. The President summoned the leaders of the House of Representatives to the "White House" on May 14 and once more presented his view that the Japanese Exclusion Bill should be postponed pending diplomatic negotiations. Further, that Japanese exclusion should be deferred until July 1.

The only result of the President's action in America has been that both Houses adopted the Conference report on the Immigration Bill, ignored the President's plea, and practically challenged him to make use of the Presidential veto. The Report was adopted by 308 votes to 8 in the House of Representatives, and by 68 to 9 votes in the Senate. The new Immigration Bill, plus the Japanese exclusion clauses, is now at the time of writing (May 30) held in the States Department for report to President Coolidge. The Bill, after passing through the general routine at Washington, was sent by the "White House" to the Labour Department, which is understood to have approved the administrative provisions. The final step has now been taken: America has decided for Japanese exclusion.

* * * * *

What then, it may be asked, is the real cause of America's precipitate action?

Is it simply race hatred—in other words, the colour question? Is it the unarguable, age-long antipathy between East and West? Or is it merely the economic impossibility of mixing both in one country under similar conditions and laws? It is probable that the latter of these suggested causes is nearest the truth, though it can hardly be denied that something of the spirit of all three permeates to-day the anti-Japanese feeling in America.

At a Women's International League Conference held at Washington on May 1 last the problem of Japanese Immi-

gration was discussed by a delegate from California. This lady is reported to have said that the increase in population and land ownership of the Japanese in California had created an economic condition which had been fanned into an intense racial hatred by the politicians. From this had resulted the Japanese Exclusion Law.

Has Japan any real need to find room for a surplus population?

A Japanese writer in the *World's Work* has put the matter succinctly by observing that "the Japanese people must either die a saintly death in righteous starvation, or expand into the neighbour's backyard, and Japan is not that much of a saint." The editor of the *Tokio Yorodzu*, defending his countrymen's rights to emigrate to Korea, prior to the annexation of 1910, wrote with bitter irony: "How shall we dispose of our surplus millions? Our small country can hardly find room within its narrow boundaries to accommodate its yearly increase of half a million people. We cannot kill them wholesale, nor can we fill up the sea of Japan and make dry land of it for them to settle on. We would like to go to Kansas, or anywhere but Hades, where we could escape starvation. But however hospitable America may be, she refuses to receive so many new-comers all at once. We would wish very much to cross over to Australia, but that is a White Man's Land; and although the Continent is many times larger than Korea and very thinly populated, no coloured people are admitted there. We know that Korea is thickly populated, but there the least resistance is offered, and so we go there, just as Englishmen went to America and Australia and elsewhere, forcing the natives to make room for them, in days of yore."*

If this be the state of affairs in Japan as regards population and food supply, who can wonder at her insistent demand for expansion? If the West has decided—as it undoubtedly has—upon forcibly restricting Asiatic immigration, and upon keeping vast areas of the world's surface

* J. O. P. Bland, "China, Japan, and Korea."

as "White" countries, some solution must be found applicable to nations like Japan. As an economic doctrine the reservation of "White" countries may or may not be sound. It is, at any rate, justified by the fact that unrestricted Asiatic immigration would before long result in a Chinese pacific domination of Asia—probably in time of America. But it is not alone the fact that Asiatic immigration must be restricted, which so deeply wounds the pride of Japanese. It is to a large extent the method chosen by America to enforce this doctrine.

If we wish to judge fairly, let us consider for a moment the point of view of an educated Japanese gentleman.

In two generations his country has risen from an obscure Asiatic island-nation to be one of the five dominating powers of the world. Has any other race in the history of mankind accomplished such a miracle? Japan feels herself to be the equal—in her own mind in many ways the superior—of any of the great world Powers. Her one cardinal aim is to be recognized as the dominating Power in the East—the leading light of Oriental civilization: not, be it well said, of Western civilization, for these two are yearly growing further and further apart.

A generation ago, to imbibe Western civilization represented to most Oriental nations the summit of their ambition. To-day this is no longer the case. Witness the growing antipathy in China, in India, and throughout the East.

Here, then, is a citizen of potentially the most powerful and civilized Asiatic nation the world has ever seen, one whose intense pride of race equals, if it does not surpass, that of most European nations, definitely and finally informed that he cannot be accepted on an equal footing with White races. To realize the blow to Japanese *amour-propre* it is necessary to try and imagine all Whites debarred entry to Asiatic countries except on conditions similar to those of the United States' new Immigration Law.

Educated Japanese know well that discrimination against Asiatics—not *qua* Asiatics—must from an economic point

of view guide the policy of certain countries. America and Australia are contiguous countries to Japan and China, and would be the first to suffer if unrestricted hordes of cheap labour were allowed to overrun them unchecked. In Africa, as well as in America and Australia, the conditions are such that White labour cannot submit to being eaten up by unrestricted Asiatic competition.

It remains therefore to endeavour to find a *modus vivendi*.

Granted there may be unassailable reasons for curtailing Asiatic emigration in certain portions of the world, there are undoubtedly others where this rule does not apply. Yet Japanese immigration into the Philippines, New Guinea, Brazil, Mexico, and other parts is looked upon askance. Until such restrictions are to a much larger extent than at present removed, rivalry of races is not likely to lessen.

The present tension between America and Japan is heightened by the fear in the U.S.A. that Japan's naval strength in the Pacific exceeds the allowance agreed upon at the Washington Conference. An enquiry as to whether the ratios laid down for the navies of Great Britain, America, and Japan are being maintained is already proposed, if not in progress.

Nor should it be forgotten that America is in the throes of a Presidential Election, and that politicians sometimes work with any material which suits their immediate purpose. The danger of including such "live-wire" issues as race-rivalry in national politics hardly requires to be commented upon.

To sow seeds of ultimate conflict between two friendly nations as part of a political campaign is only later on to reap the whirlwind. Anti-Japanese feeling on the Pacific coasts of America goes deeper than any passing political wave.

It has aptly been described as "the most tremendous problem confronting the world."

It is neither more nor less than that.

BRITISH TRADE AND MARITIME STRATEGY IN THE FAR EAST

BY CAPTAIN ALFRED C. DEWAR, R.N.

IN the Burmese pavilion at Wembley, I read in the *Rangoon Times*, of March 26, an address by Rabindranath Tagore. He stated in it that "he was a lover of man and had come to claim love from them," and also "that every country produced something which belonged to the whole world—not military power nor political strength, but great ideals which come from the heights of consciousness of the people." The true significance of his words is to be found in the Exhibition, which is a monumental expression of the idea that love of man may take the form of working for him, and that one of the ideals for which Great Britain stands is untiring perseverance and patient sustained effort in establishing a régime of order and law. Love of the jungle may inspire poetry about the jungle, but it may also take the form of putting the jungle in order and of making it secure for human habitation and work. The history of the rubber industry in Malay is not concerned with the pursuit of mere riches or of military power, but is a story of years of patient research and co-operative effort by Mr. James Collins, Sir James Hooker, and the workers at Kew, supplemented by the energy and initiative of Sir Henry Wickham, who succeeded in getting rubber seeds from Brazil to Kew in 1876. But to grow rubber, or anything else, a certain degree of order and security is necessary, and in the attainment of this security, which is one of the ideals of the British race, sea-power (which means merely the maintenance and security of our communications by sea), has played and must continue to play a great part.

In the Far East the question of the maintenance and protection of our communications by sea presents

a problem of some complexity, for our trade grew up, and our ports were established and flourished there, before the rise of any great naval Power in the Far East. Maritime strategy is the science of applied sea-power, and our strategy in the Far East is closely associated with the two great seaports of Hong-Kong and Singapore. When Sir Stamford Raffles founded Singapore in 1819, Japan had not entered on her new era, and things had changed but little when Hong-Kong was ceded to us in 1841.

These two harbours occupy a place by themselves in the great chain of Imperial strategy; they are both great entrepôts of trade, where the ships that link the East and West congregate before passing on their way.*

There can be seen the flags of the P. and O., Ellerman, British India, Blue Funnel, Glen and Shire, Bibby, and Henderson, flying side by side with the Messageries, Rotterdamsche Lloyd, and Nippon Yusen; and it only requires a glance at the map to see that Singapore ranks with Gibraltar, Suez, and Panama as one of the great gateways of the sea. On the other hand, there are some who are not attracted by great entrepôts of trade or gateways of the sea. But those who argue on these lines cannot escape the iron fact that Great Britain's population of forty million odd is not maintained by cultivating the surface of the land (which could barely feed a third of that number), but by disembowelling it of coal and iron and by manufacturing all sorts and sizes of things, which we exchange for food and other commodities in the four quarters of the globe.

We are confronted with the economic fact, staring us coldly in the face, that we are dependent on our overseas trade for the actual bread and meat we eat, and to be careless of the great entrepôts of that trade is to be care-

* No fewer than 25 steamship companies call regularly at Singapore, mustering some 252 ships, of which 52 per cent. are British and Australian, 12 per cent. French, 10 per cent. Japanese, 9 per cent. Dutch, 1 per cent. Spanish, 3 per cent. Italian, 3 per cent. United States, 1 per cent. German, 2 per cent. Siamese, 5 per cent. Chinese. In 1922, 5,318 vessels entered Hong-Kong of 11 million tons, about 44 per cent. of which was British.

less of the foundations of our existence. The daily bread of our existence depends upon our trade. People may argue that the coal industry should cease if it cannot pay what is regarded as a sufficient wage, but the exponents of this theory forget that when coal ceases to go to the Argentines, the wheat from the Argentines will cease to come in, for the farmers there, and in Canada and India, too, have no more intention of working for Tagore's love of mankind than the miner himself has.

It is impossible in one short article to discuss the enormous ramifications of our trade and its close associations with maritime strategy and sea-power, but the following figures for British Malaya,* whose population in 1921 was 3,358,054, are interesting:

BRITISH MALAYA, 1923.†

	Value in £ Million.	Percentage with United Kingdom and Dominions.
Imports ...	£69·088	35 per cent.
Exports ...	£78·470	26·4 "
Total trade ...	...	31 "

The total amount of tin exported in 1923 was 1·173 million pikuls, representing some 30 per cent. of the world's output;‡ and of Para rubber, whose planting on a large scale only dates from 1895, there was exported 5,645,164 centals of 100 lbs.§ Of the tin some 67 per cent. and of the rubber some 64 per cent. went to the United States, with a return, no doubt, to ourselves of meat and cotton across the Atlantic.

These figures represent an appreciable amount of the total volume of British trade. In 1921 the total exports from the United Kingdom amounted to £689·882 million, and of this at least 31 per cent. passed over the trade routes

* Comprising the Straits Settlements (Singapore, Penang, and Malacca), the Federated Malay States, and the Unfederated Malay States.

† "Annual Summary of Imports and Exports of British Malaya, 1923, Singapore, 1924," by Mr. A. Roose, Registrar.

‡ Average, 1917-1922, 31 per cent.

§ Value of tin exports \$119,682,030, or about £13·8 million, with \$1 = 2s. 4d. Value of rubber \$282,619,550, or about £32·9 million.

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to Australasia and the Far East.* And these figures do not include the large stream of intermediate trade between these countries, the bulk of which is in British bottoms.†

Now, the fallacy into which many fall is to regard this trade as a thing of dull figures only, something remote and inconspicuous, ploughing a distant furrow "by the long wash of Australasian seas far off." It is, in fact, our very existence. Of the £689·882 millions of exports, £588·889, or about 85·5 per cent., represent manufactured goods made by British factories in these islands, and with which we buy the bread, which we do not and cannot grow. Our trade may lie far off, but its significance lies at our very doors, and its security is an imperative necessity.

Nor is this the only responsibility we bear. The security of our dominions overseas is a trust which we cannot repudiate. Australia was at Gallipoli, and if anything menaced Australia we should have to be by her side. The problem of defence and security is one of a threefold co-operation between the Navy, Army, and Air Force, but the greater the distance, the greater must be our dependence on the sea and sea power, for all supplies must go by sea, and, over any long stretch of ocean, must be dependent on the Navy for their security at sea. Air forces can never be a satisfactory convoy, for heavy bombers cannot operate much beyond 200 miles, and cannot stand by sinking vessels and take the crews and passengers on board.

Now, the essential condition for the maintenance of sea-power in any maritime area is the presence of a fleet superior to that of one's opponent.‡ The efficiency of the fleet must depend largely on the proximity of a suitable

* In millions of £: British India 104·102, Australia 43·078, China 24·833, Hong Kong 6·332, New Zealand 12·866, Dutch Java 10·765, Straits Settlements 7·334, Federated Malay States 2·162, Ceylon 3·297 ("Annual Statement of Trade of United Kingdom, 1922").

† For instance, British India sent to Java £1·452 million of goods and received £7·809 million.

‡ Mahan, "Naval Strategy," p. 190.

base, and the principles governing this question are discussed at length by Mahan. Napoleon's maxim that war is a business of positions is equally true for the sea, but the fleet is the primary consideration, and it must not be tied down to the defence of its base. The base must be able to defend itself, which means that it must be equipped with a sufficient force of troops, artillery, air force, mines, and submarines working together under a single command in a co-ordinated system of defence. These elements cannot be improvised at a moment's notice; they are all a source of expense—expense of initial provision and expense of maintenance—and it is important, therefore, the bases should be carefully selected and sufficiently garrisoned.

Mahan, comprising the essentials of a base under three heads—Position, Strength, and Resources—regards under the latter head ample provision for docking as the principal consideration.* It is important, however, to have a clear appreciation of the relationship of the fleet to the base. The base is there to maintain the fleet, but the fleet is not there primarily to defend the base. In war the defensive exists in order that the offensive may act more freely. In sea warfare the offensive is assigned to the fleet, and it must not be asked to abandon this attitude and undertake the task of defending ports, which is the business of a composite and specially organized defensive force. A striking instance of this occurred in the late war. Admiral Patey, in the battle cruiser *Australia*, considering that Von Spee's appearance off Tahiti in the Society Islands on September 22† was a clear indication that he was bound for South America, asked on October 3 for fuel arrangements to be made to follow her across the Pacific. But the New Zealand Government was full of anxiety, and the Admiralty, giving way to it, would not permit the *Australia* to go beyond Fiji. There she was, tethered to the task of covering

* Mahan, "Naval Strategy," p. 195.

† The news came by a small steamer to Samoa, thence by wireless to Suva, Fiji, thence by cable to New Zealand, reaching London on September 30.

Samoa, Fiji, and New Zealand, and there she was on November 1, when Cradock's flag sank at Coronel.*

The principles of maritime strategy are very simple. It is their application that is complex. The essentials of sea-power in any area are, a sufficient fleet working from a suitable base. In the Far East our strategy is confronted by two main tasks :

- (a) The security of Indian and Eastern trade and of Indian and Eastern territory.
- (b) The security of Australian† trade and of Australian territory.

The first task and the security of the Australian trade route can be secured by a convoy system and a force working from a position commanding the chain of the Eastern Straits,‡ which constitute the door into the Indian Ocean and on to the Australian trade route.

This task points inevitably to the area between Singapore and Port Darwin, and as inevitably would require a base at Singapore.

The security of Australian territory falls, however, under a different category.

This would depend at first on a strong and efficient field force working in conjunction with a composite force of submarines, air units, light cruisers, and minelayers, which would certainly require at least one secondary base in the coastal area most vulnerable to attack.‡ This may be regarded as the coastline between Brisbane and Melbourne, with another secondary base at New Zealand.

Naval war on a big scale resolves itself largely into problems of distances and resources.

A war between the United States and Japan or between Great Britain and Japan (may it never arise with a nation

* She arrived at Fiji on October 12, and was in its vicinity till November 7, when she received orders to proceed at once to Honolulu.

† Including, of course, New Zealand.

‡ Singapore, Sunda, Bali, and Lombok by which the *Emden* entered on August 27, 1914.

that was so true an ally!) would be a long-distance war, differing widely in many of its aspects from the late war, where the distances between the two main fleets were small and the proximity of docks and bases tended to obscure the paramount importance of the base in war.*

It may, too, be stated with some degree of certainty that the distances involved in a war between the United States and Japan are so great as to preclude either of the combatants invading the home territories of the other, unless it could rely on a great superiority of naval and military force, and could secure a suitable base at the outset of war. The degree of control, achievable in any maritime area, depends to a considerable extent on a fleet's proximity to its great industrial bases of manufacture and supply. In the area lying between Port Arthur and Formosa, Japan must tend by the very nature of things, and their subservience to time and space, to exercise a superior degree of control, and our ability even to hold Hong-Kong would probably depend largely on the attitude of the United States, or possibly of China—so far as the latter can be regarded as a military power. No doubt very different opinions may be held on this point, but it will not be disputed that it is one of the crucial questions of naval strategy in the Far East. It is necessary at the very outset to have a clear idea of what Hong-Kong is and what it stands for. It is one of the bastions of British and European trade in the Far East. It might also be the principal base for an offensive against an Eastern Power; but if such an offensive is not practicable, and it may well be doubted whether it is practicable against Japan in her own home waters, then we are faced with the question of asking a fleet to remain in an area for the sole purpose of covering a base, where there is no great question of national integrity, such as exists in the case of Australia and New Zealand, at stake.

* And even at home within a couple of hundred miles of the whole industrial resources of the kingdom, Lord Jellicoe found it difficult to institute an efficient system of protection for Scapa Flow.

The China Sea from Formosa to Japan tends to fall within Japan's natural sphere of control—in other words, Japan would be able to maintain her trade and security of passage there more easily and economically than any other Power.*

It would require a conference of technical experts to tell us how long it would be possible to defend Hong-Kong and to stave off a bombardment in the absence of a battle fleet. One can imagine a composite system of defence built up out of heavy bombers, submarines, mines, heavy mobile howitzers, destroyers, and light cruisers which could prevent any landing on the mainland within 150 miles; but whether such a force could guarantee the permanent security of a port is a question for careful technical investigation.

If a fleet is not definitely given the task of covering Hong-Kong, which according to Mahan is not its true function, the defence equation of Hong-Kong becomes a difficult one, which will always be exposed to a strong drag down in the direction of Singapore which is the natural covering area for the Indian Ocean and Australian trade route, though Hong-Kong is better situated for a flank attack on the Yokohama to Sydney route.†

But whether one's base be at Hong-Kong or at Singapore, its principal requirement, as Mahan has pointed out, is docking accommodation. A Japanese ship could return 1,000 miles, be docked and repaired, and be back in three weeks. Failing a dock in the East, a British ship would be compelled to traverse some 8,000 miles, and could hardly be less than three months. How can an Admiral be asked to do anything with his nearest dock 8,000 miles away?

* Yokohama is 1,580 miles to Hong-Kong; Singapore to Hong-Kong is 1,440 miles. These distances and those on the plans are approximate (not more than 1 per cent. error). For correct distances, see Admiralty Distance Tables.

† Hong-Kong some 1,800 miles to the Yokohama-Sydney route; Singapore some 2,700 miles.

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Maritime strategy, then, in the Far East resolves itself largely into the question of docking accommodation. Bulges have increased the width of the battleship to some 105 feet, and the docks at Singapore and Hong-Kong are no longer large enough.*

Nor is it permissible to argue that the battleship is out of date. This view is not held by a single Admiralty of the leading naval Powers. Aircraft and submarines, though powerful instruments of warfare, have serious limitations, and the surface vessel still remains the dominant factor in naval war.†

The fallacy lies in thinking too exclusively in terms of any one type; no one type is all sufficient or can circumscribe the whole field of war. The value of all weapons, instruments, and craft is relative, and each is only a single instrument in the symphony of war. The submarine attacks the battle-cruiser, the destroyer attacks the submarine, the light-cruiser attacks the destroyer, and the battleship returns to attack the light-cruiser. Again, the mine menaces the battleship; the mine-sweeper attacks the mine; the destroyer, with heavy artillery, ashore or afloat, behind it, attacks the mine-sweeper; the battleship and aircraft attack the heavy artillery, and so on through all sorts of varying conditions.

Certain lessons, however, stand out from the experience of this war. They do not include the power of the submarine to defeat the battleship, for not a single battleship of the Dreadnought type was sunk or damaged by a submarine during the war. Nor is there any proof of the terrific potency of aircraft. Of 203 German submarines, accounted for during the war, not more than 10 can be

* Hong-Kong, breadth at entrance 88 feet; Singapore, 99 feet" ("China Sea Pilot," vols. i. and iii.).

† See Report of Joint Board (United States), 1921; also Prize Essays on "Air Strategy," by Wing-Commander C. H. K. Edmonds, D.S.O., and by Lieut.-Commander G. N. Boyes, R.N.; and debates between Viscount Curzon, M.P., and Admiral Mark Kerr, C.B., December 14, 1923, in the *Journal of R.U.S.I.*, May, 1924.

attributed to air attack.* Of the 54 British submarines lost during the war 1 certain and 2 possibles were the result of air attack. The prominent lessons of the war are two: First, the great strength of a composite defence of minefields, aircraft, and heavy guns either on land or sea, as, in one form or another, in the Bight, Dover, the Dardanelles, and Gulf of Riga; secondly, the value of convoy both against surface vessels and submarines. But convoy involves the support of battleships, if the enemy can bring battleships against it. Aircraft work at their highest efficiency when working from a secure base not more than 200 miles from the enemy, but in a long-distance war their coefficient of utility is small, and they cannot be used for convoy.

One thing, however, is certain—that the complexity of naval warfare is increasing, and the importance of a well-equipped base increases with it. Mr. Ammon's arguments against a base at Singapore may be reduced to two. First, that trade will be adequately protected by the cruisers being built; and, secondly, that Singapore has nothing to do with the defence of trade. Both arguments are untenable. It must be obvious that light cruisers cannot defend trade if the enemy supports his attack with heavy ships; and if he can operate in the Indian Ocean or Java seas with heavy ships—while we have none—then all the King's cruisers and all the King's men cannot keep trade going in the Bay of Bengal. The proposition that Singapore has nothing to do with the defence of trade need not be answered. One base in the Far East is an essential to us, and we have not even got one. It is difficult to avoid the melancholy conclusion that the Government fails to realize that our very existence is wrapped up in trade and sea-power, and that the ships faring across the sea are the actual concrete answer to the prayers that rise, consciously or unconsciously, from millions of hearts for daily bread. We mine coal and spin cotton to

* These figures may be relied on. The writer worked in the war in the section of the Intelligence Division, which dealt with enemy submarines.

exchange for food. Our food comes across the sea, our coal and cotton go across the sea, and it will be an ill day for us when we can no longer give them the security which is the foundation of trade by sea. The experience of ages and of this century tends to show that such security cannot rest on amiable phrases. We rely on the bonds of empire stretching across the sea.

"But those do hold or break,
As men are strong or weak."

THE FUTURE OF THE ARMENIANS

BY PROFESSOR G. MICHAELIAN

(Formerly Chief of the Armenian Press Bureau in Switzerland and Paris)

THE terrible storm that broke over Europe in 1914 has caused Empires to fall and liberated many nations from a foreign yoke; other nations have undergone a change in their frontiers, but all are now in a state of prostration and exhaustion such as can find no parallel in history.

In this general chaos the eternal Eastern question has remained and threatens to blaze up in an entirely new form.

England, ascending from the Persian gulf through the valleys of the Tigris and Euphrates, has established herself in Mesopotamia, and her present task would appear to be to strengthen her communications between India and Egypt. France has assured for herself a first-class position in the Eastern Mediterranean by her occupation of Syria. Italy, on the other hand, has been frustrated in her plans regarding Asia Minor, but has made herself at home with a naval base in the Dodecanese and watches events with a keen eye. To borrow the expression of Mussolini, "she has her eyes fixed on the East." As for Greece, her catastrophic defeat in Anatolia at the hands of the Turkish troops has relegated her for a long period to a position of no importance. In the North the formidable and mysterious power of Russia, which in the first years of her revolution was considered to be of no account, cannot be regarded as such any longer, and represents an unknown factor. Turkey now has a population of five million scattered over a territory twice the size of France. She cannot believe herself to be permanently safe from all aggression.

The question may now be asked: "What is the position of Armenia and the Armenians on the new Near Eastern chessboard?" There is in existence an Armenian Republic which forms part of the Federation of the Soviet States of Russia.

It possesses its own Government, Administration, and Army. This autonomous State contains within the limits of Russian Armenia a population of more than a million. Like the other Republics of the Caucasus, and with the approbation of the Moscow Government, it signed a Peace Treaty with Turkey at Kars on October 13, 1922. In Turkish Armenia, however, there are no longer any Armenians. During the war the Armenians who inhabited the Eastern Provinces of Anatolia have in great part disappeared through epidemics, battles, deportations, and massacres, while others emigrated to neighbouring countries. Moreover, a Turkish law which has been recently passed in the National Assembly of Angora forbids Armenians to inhabit the Eastern Provinces of Turkey—that is to say, precisely the region which the Armenians have claimed in the past as forming part of their country. There are, however, a certain number of Armenians in Constantinople and certain portions of Western Anatolia, but their total number is very small and unimportant. The Armenians who remain in Turkey are, of course, citizens of the Turkish Republic animated by sentiments of loyalty to the Turkish State.

Armenians are also to be found in groups, large and small, in all the countries bordering on Turkey—Persia, Mesopotamia, Syria, Palestine, and Egypt. Further afield they are to be found in Cyprus, Greece, Bulgaria, and Roumania. If all these groups are taken together and the Armenians of Europe, Asia, and America are included, the sum total would represent about one and a half million souls without counting the citizens of the Armenian Soviet Republic. Accordingly there remain, after the terrible torment through which Armenia has passed, about two and a half million, of whom one million are united in the Government of an Armenian State.

Now the events of the last years have resulted in two facts of capital importance: the foundation of a small Armenian State and the dispersal of the remainder of the

Armenian people outside the reach of Turkey. These being the new conditions, what should the Armenian attitude now be from the political point of view? The reply to this question is clear, and is dictated by the experience of the last fifty years. From 1876 to the present war the chancelleries of Europe have on many occasions occupied themselves with the Armenian question. Some politicians under the pretext of ameliorating the lot of the Christian populations, but in reality often with a view to securing certain advantages for their own country, have pleaded the cause of the poor population in Armenia suffering under the yoke of the Sultan. Yet among young Armenians there were to be found those who were endowed with a sense of idealism and patriotism and who lent their ear to these policies. Revolutionary committees were set up with the object not only of securing national liberation, but also to propagate Socialist doctrines of varying degrees of intensity. These Committees set to work both in Russia and Turkey, attracting on both sides of the frontier the attention of the Governments. The leaders of the movement were prosecuted in Russia as well as in Turkey, but with this difference, that the Turkish Government, instead of confining their attention to the leaders, also attacked the population who were not responsible.

One cannot but admire the enthusiasm of those who were ready to suffer for their ideal, experienced the horrors of Russian and Turkish prisons, and did not flinch at the prospect of death. I repeat that the grandeur of their soul calls for admiration, but unfortunately all this heroism was expended without a tangible result for the Armenian cause, which was even sometimes prejudiced thereby. It is a thousand pities that these sincere patriots in their inexperience unconsciously became the tools of the politicians. This is the truth which the great majority of the Armenian people have begun to realize, and it is a conclusion that they have the right to draw from the events of the last fifty years.

These being the facts, the question may be asked whether there is any justification for the existence and activity of political revolutionary committees of any kind in the new phase in which we have now entered. Those who may be esteemed as our clearest thinkers would give a decided negative reply. In this connection it may suffice to quote the opinion of an eminent Armenian, Mr. H. Katchaznouni, formerly Prime Minister of Independent Armenia, who has recently developed his ideas with unassailable logic in a pamphlet entitled "The Armenian Revolutionary Committee Dashnak has nothing more to do" (Vienna, 1923). It is a manifesto written in Armenian, emphasizing that, in view of the new position of the Eastern question in general and that of the Armenians in particular, there is no longer any scope for the activity of any revolutionary committees either in Russia, Turkey, or elsewhere. And he goes still further, and says that there is no longer any reason for an Armenian political party in any country.

In Russia there exists the Armenian Soviet Government, whose duty it should be to defend the vital interests of all the inhabitants which they govern. They consider themselves to be in a better position to appreciate the true interests of these inhabitants than any party or committee living abroad. No interference from outsiders in the Government of that State would be tolerated.

In Turkey, the Armenians who have remained there reside as Turkish citizens, and owe to Turkey for that reason sincere respect and loyalty, and should, if called upon, help to defend her institutions and interests. We are convinced that the friendship between these two elements can be renewed at the present day for the sake of joint mutual interest provided the regrettable events of the past years are cast into oblivion, events which have harmed both sides without giving any profit to either. Moreover, Turks as well as Armenians have begun to realize that these race-hatreds have been encouraged from

outside, with the effect that both elements were weakened, which at the same time enabled the foreigner to profit from their quarrels and from the weaknesses resulting therefrom. How far European politicians have abandoned their previous policy remains to be seen. The fact remains that in the Treaty of Lausanne they have left the door open for future action, thanks to the clauses according rights to minorities. Here is a danger which might prove detrimental to both elements. It is of the most vital importance to the Armenians in Turkey to turn a deaf ear to such exhortations. A sincere and complete entente between Turks and Armenians for the purpose of arranging in an amicable manner all the questions that lie between them is the surest and most reasonable path for both parties to tread. During the last months articles have been published in the Turkish and Armenian papers which are full of the spirit of wisdom and moderation, expressing the hope of a return to Turco-Armenian friendship. Both sides are looking forward to the return of the good feeling which characterized their relations in the old days. Let us have the courage to confess that mistakes have been committed on both sides, and that both sides have paid for their experience very heavily. What interest is served in continuing a blind and aimless hatred? Such would not be to the interest either of the Turks or the Armenians!

I feel that I am interpreting the sentiments of both the Turks and the Armenians when I make an ardent appeal to these two nations to forget their wrongs and errors and renew the ties of sincere and loyal friendship, which will enable them to work hand in hand for the pacification and progress of the Orient. History can point to many examples of nations, separated for a long time by inextinguishable hatred and a long series of sanguinary conflicts, who have been able to establish in the end cordial relations. I may add that such nations thereby add a bright page to the history of nations. What is it that constitutes the nobility of the people? Not hatred and brutality, destruction and vengeance, but idealism and generous feelings.

This, then, is the actual position of Armenia in her relations with Turkey and Russia. Moreover, I have given the reasons why there should no longer be any talk of revolutionary committees and political parties aiming at territorial or other claims. But it must not be thought that Armenians thus scattered over the earth have no task to accomplish or duty to perform. The war has left as a legacy hundreds of thousands of orphans, a problem which the Armenians cannot ignore. These children have to receive education. Then there are hundreds of thousands of emigrants, many of them widows and women without sustenance, who also must be succoured. Their condition can only be bettered by great and solid effort made by the Armenians acting as a whole. Accordingly the Armenians, who are to be found everywhere, from India and the Far East to the New World, must remain in close touch and maintain their national language and traditions. If this great work is conducted methodically, the number of Armenians abroad should, in view of the prolific character of the race, be doubled within twenty years. But it is not numbers only, but organization and prosperity that count. Therefore the organization and prosperity of our people should be our main objective.

In the past it was the Armenian Church which served to preserve the keen sentiment of solidarity of our race. I feel convinced that it can still render great services in that direction. At one time the general principle of Armenians who emigrated to foreign lands was : "One Church for each group." To-day this principle has been developed to conform with the needs of the time. The quotation should now run : "One Church, one school, and one assembly hall for each group." The effect of this change would be to furnish for each group an effective centre of activity. But these centres of activity, if they remain isolated, will find their vitality gradually pass. The imperious necessity, therefore, is a general organization uniting all these different groups in one living home; constituting, as it were, its

heart and brain, and ensuring to each member a proper measure of prosperity.

This central organization must be a new rallying-point for Armenian life. None of the Societies existing at present correspond any longer with the actual needs. Moreover, in order to enjoy the necessary authority in all circles, it must be created by the general consent of all. Its basis of action will be the harmonious collaboration of all the living forces of the nation, and that is an object for which every Armenian can, and should, work, and which should not give rise to any dissension. History has shown that those nations alone which create a centre for their general action in the common interest, and who at the crisis of their fate can concentrate and co-ordinate all their energy and banish intestine dissensions and quarrels, can emerge triumphantly.

This new organization should have different sections to deal with every branch of its activity. I venture here to enumerate the most important :

1. Economic Section of the Armenian Republic.
2. Section for the Young : education, sports (Boy Scouts, Students' Union, etc.).
3. Orphan Section.
4. Emigration Section.
5. Mutual Aid Section.
6. History, Literary and Art Section : publications, intellectual and artistic unions, etc.

The above are a few subjects on which the activity of the Armenians as a whole might be employed—some are already covered by existing societies. But the essential is that there should be a central body, working in the general interest, and preventing overlapping and the frittering away of energy. The Armenian people, after the terrible trials through which they have passed, need a long period of rest and peace at home and abroad to heal the sores of the past and work with patience and method and indomitable courage along the avenues of progress.

SHORT STORY : EX ORIENTE

BY RACONTEUR

THE following incident from the life of the Buddha was told me some years ago by a Burmese priest.

Every evening Prince Siddharta used to go and sit by the lake. It was the spot he loved best in the whole palace gardens, for there he seemed sheltered from even the echo of the outside world. And, further, it was full of deep, penetrating beauty. But what chiefly fascinated him were the delicately coloured lotus lilies that floated in full splendour on the gleaming water, like symbols of his own far-away fantasies. He would sit for hours on end, dreaming of the reality behind the world of apparitions. One evening—shortly after he had wandered for the first time through the streets of Kapilavastu—he was suddenly wakened by the passage of a breath of wind. It seemed to gather round him : he was aware of a dank blight. His eyes roamed over the water. He saw the lotuses quiver uneasily. He rose in a rebellious spirit and went to find Yashodhara. She lay nursing the boy she had quite lately borne him. Pity filled the Prince, and he chose for the time being to keep silent about what he had seen.

On the three following evenings he sat by the lake, and each evening before the sun set a breath passed across the face of the water, and the echo of a rustle lingered in the trees. And each evening the lotus lilies seemed to open and shrink. On the third evening he noticed that their petals were stained with yellow. He passed the next few evenings away, but, returning on the sixth, found that the yellow had spread from the tips to the chalices, and when about sunset the wind rose the lilies no longer resisted, but sank their heads

with a faint tremor. And suddenly the image of the old greybeard whom he had met in the streets of Kapilavastu flashed through his mind. Until the day he had walked through his father's city he had been blind. Many a time he had seen flowers droop, leaves wither, but the meaning of this change had always escaped him. As he strode towards the palace, he seemed to see things differently, and a wave of sadness swept over him.

He found Yashodhara with her child. For a few seconds he stood silently at her side. But his look was grave, and the girl noticed there was something on his mind.

"My lord——" she began, looking at the same time at Rahula.

"Yashodhara," he said, interrupting her, "Rahula must die."

The girl started up, disturbing the child at her breast. The Prince continued :

"I have just learnt that life and the thirst for life brings endless pain. I have discovered that old age, decay, and death is everywhere. Through our common suffering the humblest flower is linked with us. The winds carry a mysterious blight from the timeless regions of the other worlds. Even Brahma——"

"Hush!" the girl broke in. "But tell me first, why must Rahula die?"

"For salvation, his own salvation," Siddharta whispered, bending over the child.

"But as death is the final necessity, let him first live his life," Yashodhara entreated.

"Life is gradual decay," the Prince answered meditatively. "My father did wrongly in shutting me from the world, for every man must see at some time or other, unless he can proceed in the white heat of ecstasy without respite. As we have wronged the boy in begetting him, we must undo what we have done without his knowing it."

"If," she replied, "I cannot dispute the cruel knowledge you say you have found, I can at least beg you to grant me

three days in which to find an answer to the terrible riddle—for it is a riddle—you have set me ; and then if I can satisfy you with my answer, you must let the child live."

After hesitating a moment, the Prince agreed. Three days later he appeared again before Yashodhara.

"Well?" he began.

"Did you not say," she said straightway, "that living and the thirst for life mean endless pain? But how do you know that pain in itself is evil? When I bore you Rahula I suffered greatly, and yet I would suffer a thousand times more for my love for you. And there are many others who would suffer for what they love, even if their love be life itself ; for suffering is perhaps one of the sweet as well as one of the bitter conditions of our existence."

"Yashodhara," the Prince replied, "your words are empty symbols. What you have said condemns everything we strive for. Everything passes, is unendingly changing, and if in the passing sweet and bitter always meet, the necessity of life is the paramount evil."

"Give me," she beseeched, unable to answer this, "two more trials."

Very reluctantly he consented. The next day, before he had spoken, she began pleading desperately.

"Listen. Wait twelve years, so that he will be at the age of understanding. Then let him answer you. Who knows? Perhaps he will cherish suffering as I, knowing there is colour and ecstasy in return for darkness and misery. And even though the one conditioning the other implies evil, as you say, perhaps he will accept evil."

The Prince's brows contracted.

"You argue as a woman, see things as a woman rejoicing in martyrdom sees them. And you misunderstand everything. If the boy lives till the age of bigger consciousness, he will want to live and live for ever. That is the evil. The thirst for life will have conquered him ; and what does that mean? Why, that life is turning on itself, is mocking itself,

laying pitfalls for the weak. No, Yashodhara, you have failed to convince me."

On the third evening—the life of Rahula hanging on the very slender threads of her reasoning—she poured out her words, as soon as the Prince appeared, in a wild torrent.

"Everything passes, so you say, my lord; each moment of time brings with it new birth, decay, death; each moment of time that marks the constant flux cries to us: 'All is *maya*, nothing remains; there is no basis, there is no foundation to this everlasting, tireless passing.' It is your Truth, my lord, the Truth you discovered. Yet what is Truth? Everything burns and passes, you say. But will the men who come after you say the same? Suppose they say each moment of time brings new birth, new blossoming, and new . . . Death, that appears to you as the culmination of decay, a sinister answer to life's arrogance, may appear to them as a larger, more comprehensive existence. For each man's attitude to life, including that of our boy, must always differ, always change, since there is nothing constant. Your words cannot be for all time, unless you contradict yourself; for if everything passes and dies, so must also this Truth of yours."

When she had finished her eyes shone triumphantly. She had striven hard to summon all the resources of her wit.

There was a slight pause before the Prince took up her argument. He looked perplexed, and from his perplexity she gained hope.

"I admire the way you reason," he began. "Your words would seem to prove me false; but words are powerless before an intuition. An intuition delves where the intellect can only roam. What I know to be true transcends as yet the poor symbols of speech. To-day you have outwitted me with words, but to-morrow my Truth will thunder through the world. New paths will be opened away from the road we are all blindly following." Then, taking her hand, he added: "Rahula shall live."

The girl threw her arms wildly round the Prince, but he

gently laid her back on the couch, and without a word left the room.

* * * * *

He rose late that night, and went, before leaving the palace, to look once again at Yashodhara. She was asleep with Rahula. Tears rose to the eyes of Prince Siddharta as silently he bade farewell to the two. An attendant awaited him in the garden.

When the sun rose on the next day, two men were fast leaving the territory of the Sakyas ; one of them, I remember the old priest added, was Gautama the Muni, who sought and found an immutable Truth in the shifting scheme of things.

PROCEEDINGS OF THE EAST INDIA ASSOCIATION

THE FORESTS AND TIMBERS OF BURMA

BY ALEXANDER L. HOWARD

FOR many years after the establishment of British power in India but little attention was paid to the forest resources of the country by the administration, which contented itself with the very meagre revenue derived from royalties payable by firms or individuals engaged in exploiting the more valuable and accessible forest areas. Indiscriminate felling, with its inevitable accompaniment of waste of valuable material, proceeded unchecked. To this destruction of timber (which in practically every country has preceded the formation of a forest service and scientific conservation) was added a factor to which India is peculiarly liable—namely, the wholesale clearing of forest areas for nomadic cultivation. The necessity for protection is illustrated by an incident which happened to a manager of one of the large coal-mines in India. When he first arrived he found the compound of the house allotted to him had an extremely beautiful grove of trees. Shortly after his arrival, one of his people came and explained that for a funeral they required a fire and that in the compound was a dead tree which they begged to be allowed to have for this purpose. Ascertaining that the information was correct, he gave his consent. When a year later the same thing happened again he became suspicious, and giving his consent the second time, caused watch to be made and found that no sooner had he given his consent than a third tree was girdled or ringed so that it also would die within a year.

Long before the restless West had sought Burma for the purpose of trade and commerce, huge trees were continuously growing and a vast storehouse of almost

illimitable wealth has been produced, of which in the past they have burnt and destroyed without compunction in order to clear a space for their primitive agriculture.

It was not until about the middle of the nineteenth century that the destruction and waste of the forest resources of the country began to be realized, and about this time the subject was taken up actively by the Governments of Bombay and Madras; and although enquiry was temporarily checked by the Mutiny, within the following decade Dr. Brandis was invited by the Government of India to investigate and report upon the forests of India and Burma, and his report disclosed such a serious state of affairs that the formation of a regular forest service was decided upon. Some attempts at forest conservation had been made previously to this date, perhaps beginning in 1859, and too much praise cannot be given to the handful of untrained officers who struggled along under heart-breaking conditions; but the Forest Department as it now exists may be said to have been founded by Dr. Brandis in 1864, and the British Empire Exhibition thus coincides with the sixtieth anniversary of its existence. In 1857 the first Forest Act was passed by the Legislature under the ægis of Lord Dalhousie, and during the years which have since elapsed, the Indian Forest Service, from small beginnings, has developed into one which, as regards the system of scientific forest control and the vast areas committed to its charge, has no equal in any other country of the world.

Teak, perhaps the most valuable timber which the world possesses, generally grows in mixed forest, although some plantations have been established of pure teak forest, and one of the most interesting things I have ever seen was when I had the satisfaction of seeing the Brandis plantation of pure teak forest at Myodwin in the Zigon Division, Tharawaddy, which is now fifty odd years old. The trees are all about the same height and very nearly the same girth; they are very closely grown and approximately give a clear bole from 70 to 80 feet clear to the first branch. I

measured a group which proved to be about 2 feet 4 inches to 2 feet 6 inches in diameter at breast height. I shall hope to be able to show a picture of this forest on the screen. This is a very interesting illustration of what can be accomplished in so short a time; and indeed, in another part of this district, I found trees which had reached the same diameter or perhaps even larger in forty years. While on this subject, I am reminded of two Spanish mahogany trees (*Swietenia mahogani*) which were planted in the Botanical Gardens at Calcutta, of which later on I shall show you pictures when growing in the Gardens. It occurred to me to ask that I might be allowed to show these two trees in the Exhibition, and as it was necessary to take the trees down, my request was agreed to. I sent a gang of men and had them felled, and the two trees which were growing in the Gardens this month last year have now arrived in England. The larger tree trunk which we were able to bring weighed over 10 tons and is 6 feet in diameter at the butt, and contains 4,000 feet of board timber, and from counting the rings it would appear that it has taken 113 years for the tree to attain this size.

The smaller weighs just over four tons and is 4 feet in diameter at the butt end, and contains about 1,600 feet board measure. The age of this smaller tree is ascertained as eighty-two years.

Exploration, reservation, settlement, and demarcation, and finally the preparation of scientific working plans, have proceeded steadily throughout the length and breadth of India and Burma, and in Burma to-day the State possesses 30,000 square miles of reserved forest, and 116,000 square miles of unreserved forests in which the Government exercises an effective control over the timber, which control may be briefly described by stating that the Government has power at any time to take up valuable forest areas as forest reserves, whilst the exploitations of timber standing in unreserved forests is only permitted under lease or licence from the responsible authority. It may thus fairly be

claimed that in the comparatively short space of sixty years the whole of the timber resources of the Indian Empire have been adequately protected from the possibility of future destruction, whilst nature and science have combined to make good the depredations which were giving rise to justifiable apprehension half a century ago.

Turning for the moment from India to our own position, it is interesting to emphasize the national importance of a reserve of timber supply. With regard to this country, a writer has said: "The forests of England have been a source of national safety and national prosperity in the past. A sea-faring nation whose history in the last three hundred years has been one of the Imperial expansion of an island race, we owe it largely to our home timber supplies that our ships obtained this supremacy. Again, in the centuries before the general development of our coal deposits, it was the great forest of the Weald that made the Sussex iron-work industry possible." Again, in the experience of the last war, our reserves of forests at home and of the Empire were undoubtedly essential, and possibly one of the fundamental reasons of our ultimate victory.

Coming back to the forests of Burma. Considering what has been accomplished in the past, and what is being done every day, year in and year out, the general public has but the most meagre knowledge of the activities of the Forest Department and its officers, and this is scarcely surprising, for of all the silent work done by the public services, of which the public reaps the benefit, that of the forest service is least ostentatious and furthest removed from observation; indeed, it has been truly said that the work of the forest service begins where that of the civil administration ends, on the fringes of the great forests, in which the forest officer spends many months of the year, usually alone. He never sees the full result of his labours: the young trees which he has tended will not be ripe for the axe for a couple of generations: and the records of his work are enshrined in a scientific magazine which has few

readers outside his own service, and in official blue books of which the general public, both in India and elsewhere, knows little and cares less.

Yet it has been estimated by a competent forest economist that in India and Burma there is a forest personnel of about 75,000 persons with their dependents, whilst the labour used in tending plantations, works of improvement, fire protection, and so forth, absorbs the energies of some 160,000 persons with their dependents; the last census report gives 6,800,000 persons as wholly or partly dependent upon forestry or allied industries for their livelihood. This figure, however, includes part-time labour. It is safe to say that between $4\frac{1}{2}$ and $5\frac{1}{2}$ million people in British India are dependent on forestry and allied industries for their livelihood during the greater part of the year, so that by reason of its very magnitude the forest service should command more attention than it commonly does. Apart from the fact, however, of providing so large a number of persons with a living, this Department is responsible for indirect benefits which affect a vast number of inhabitants of the country, since the influence of forest areas on climate, rainfall, water storage, and denudation are too well known to need more than a passing reference, and for the conservation of these areas the Department is responsible.

The greater and more important type of forests, however, is that in which the management is concerned mainly in providing the greatest possible outturn of timber for commercial purposes, and it may here be noted that the revenue obtained compares more than favourably with that of any other Government Department. Thus, in examining the financial results for the forest administration in British India for quinquennial periods during the last fifty years, it will be found that the surplus has risen from about £90,000 sterling (13,6 lakhs of rupees) in 1869, to about £1,070,000 sterling in 1919 (160,2 lakhs of rupees), to £1,333,333 sterling in 1920 (169,9 lakhs of rupees),

and to wellnigh £2,000,000 sterling now (300 lakhs of rupees).

This statement exhibits the striking fact that the surplus has increased nearly twelvefold during the past fifty years, and the results for the current period, though not yet officially published, are already known to be still more favourable. Apart, however, from the direct financial results, it has been estimated that, during the sixty years of administration by the Department, the forest wealth, as represented by the growing stock, has been more than doubled, this result being entirely due to scientific conservation of the forest resources, to the replacement by natural regeneration, or by plantations where the mature timber has been felled, and to the encouragement of the more valuable species by the judicious removal of those not of commercial value, whose presence tended to retard the full development of the better timber-producing trees, so that in twenty-five years hence the output of timber will be far greater than it is to-day.

There are few people in this country who realize the immense size and the great importance of this vast and wealthy Indian Empire. Professor J. R. Seeley has said :

“ There is something very characteristic in the indifference which we show towards this mighty phenomenon of the diffusion of our race and the expansion of our state. We seem, as it were, to have conquered and peopled half the world in a fit of absence of mind.”

Certainly, I have found that there are exceedingly few people whom I meet who have the least conception of the size and importance of the country. The whole area of India is 1,809,300 square miles, or fifteen times larger than the whole of the United Kingdom, which has an area of 121,000 square miles. It has twelve separate and distinct provinces apart from the wide territories comprised of the native states.

The country of Burma, with which we are specially concerned to-day, has a separate Government, a people of an entirely different race from India, and a different religion,

since Buddhism only lingers for a small extent in India. The total area of this country is more than twice that of the United Kingdom, and the area of the forest land alone is twice that of England and Scotland, much of this forest land not having even been surveyed.

During the war it became necessary for many of us to fall back upon supplies of British-grown timber to keep going, and among other purchases I happened to purchase one wood a few miles from London. You could walk from end to end of it in about twenty minutes and from side to side in less. Although the timber was not of a superior sort, it cost £2,000 for the right to cut, and when cut the timber cost only about 6d. per foot cube.

Comparing this with Burma, I am reminded that I started on a march through the forest at daybreak on Monday morning and we continued marching all the week, moving our camp at night, until two o'clock on the following Saturday afternoon. The whole time as we walked we were surrounded by immense trees of great value, and from this simple illustration it is possible to begin to realize the colossal wealth of the forests of Burma. To march through and across the forests of Burma completely in the same way would occupy the whole lifetime of two men of sixty years of age marching two miles an hour for five hours per day.

For the development and realization of this forest wealth, one of the greatest difficulties with which we are confronted is the question of transport. The wonderful River Irrawady and other rivers give a certain amount of facility, but sooner or later these highways used by primitive man prove inadequate, and have to be supplemented by roads and railways. In both of these methods Burma is far behind. In Java, for instance, one can travel by motor all over the island over excellent roads which enable the traveller to move at a very high speed. Again, the railway service in Burma is far too limited, and every kind of transport totally inadequate.

On my last visit I had reasons for realizing the great

danger which exists, because not only are these restricted lines of communication disadvantageous from a commercial point of view, but very serious from military strategic consideration; for instance, a simultaneous strike or seizure of the Flotilla Company on the river and the same thing on the railway, and Mandalay would be entirely cut off from Rangoon and from the outer world.

The British reader will have rather mixed feelings when he reads in a book published by American authors: "*India is still undeveloped and industrially backward, and the existing forest resources have barely been touched.*" It is certainly consoling when we reflect that a great reserve of forest resources still exists in this country which we are controlling. The remark, however, is surely somewhat in the nature of a reproach when we realize that after these sixty years we are only just beginning to recognize, and even now to only a limited extent, the immense value which these timbers possess.

In 1920 the total import of timber into the United Kingdom amounted to nearly £90,000,000 sterling. Of common oak from America alone the import to the United Kingdom totalled nearly £2,000,000 sterling, yet the whole of India and Burma together only contributed the miserable total of £42,843, other than teak. If this wealth of timber had been possessed by America the whole world would have known, and every sort would be advertised and exploited to the very utmost extent.

The time at my disposal to-day is insufficient to catalogue the full list of valuable timbers. For the last four years we have been prosecuting a vigorous campaign in order to make them known, and on the whole the response has been quite good. There seems lately to have been a partial awakening to the fact that money expended by this country should be spent within the Empire and not without; I say partial awakening, because even now this wholesome practice is not nearly sufficiently followed. Before the war I saw in the Transylvanian forests an oak-tree standing

which had been sold at 7s. 6d. per foot cube for the English market, while a similar and equally good tree in Worcestershire could only command 1s. 9d. per foot cube. Only too often to-day the large buyers of timber favour productions from other countries without the Empire in an entirely unnecessary manner. For instance, within the last few weeks a well-known public concern has given preference to the use of an American production in a case where Empire production could have been provided equally as good and at less money, oblivious to the fact that our debt to America is already terrible!

Visitors to the Exhibition will have a very good opportunity of seeing the numerous uses to which these woods may be applied. The whole list of valuable timbers which Burma can supply is very large, even reckoning only those which can compete favourably with supplies from other sources. There is one outstanding timber, however, the unique qualities of which should engage our earnest attention, which is the pyinkado, or iron wood, of Burma; considerable quantities of this most valuable timber are now actually in London ready for use, and arrangements have been made for a continuous supply in the future. Large sizes up to 3 feet in width and long lengths can be provided. The cost of labour is so enhanced to-day that it becomes of the first importance that any completed work should be executed in a material which possesses the greatest possible life, and it will be no exaggeration to say that constructive timber work of pyinkado will certainly last four times as long as would pitch pine, which is alternatively used; indeed, it may very likely last for ten times, because the climate of Burma is much more trying than the climate of this country, and yet this wood has remained sound and hard and perfect in Burma for certainly 200 years, and it may be much more. In such works, therefore, as public docks, ship-building centres, railway works, and wharves, an opportunity has been opened up by the use of this durable timber. A

large wharf at Bow Creek has just been finished in which the piles, camp sheeting, and capping have all been made of pyinkado. The cost of labour has been no more than if pitch pine had been used—in fact, the same contract for pitch pine, which was expected to be used, has been carried out—but this finished work will not have to be renewed as pitch pine work does within thirty years; it is unlikely, indeed, that it will need renewal within the longest lifetime of the youngest infant. Laslett in 1875 quotes Lieut.-Colonel H. W. Blake, who speaks of a pillar made of pyinkado, which originally supported a teak figure of "Godama"; the teak had *long since* smouldered away in dust, but the pyinkado was as sound and hard as ever. He adds: "At the pillar I fired a rifle shot at 20 yards distance; the ball was thrown back, making no penetration whatever. The wood seems hardened by time and exposure, and it is a fact that the Teredo will not touch it. The Burmans do not girdle and kill this tree as they do the teak, but fell and saw it up at once, and refuse to work it in a dry state." The specimen in my collection, when dry, weighed 81 pounds to the foot cube. In his table of experiments, Laslett gives the total weight required to break British oak as 776 pounds against pyinkado 1,273 pounds; and the weight required to break 1 inch square oak 193 pounds, pyinkado 318 pounds; for tensile strength, oak 30,287 pounds, pyinkado 38,623 pounds, these figures showing unmistakably the much greater strength possessed by pyinkado. Again, so far as I have been able to ascertain, pyinkado is entirely immune from the attack of any boring beetle or any other insect, which certainly cannot be said of other timbers, and certainly not about oak. I would like to add here that I have already been criticized for quoting Laslett's experiments, and have been told that they are out of date and of no value. I do not agree with my critics. I understand their argument to be that experiments regarding strengths of timber are of no value unless the percentage of moisture which the wood

contained is quoted. Laslett worked in a most painstaking and conscientious manner, and his tests were practical tests. The specimens which he used were as dry as the conditions for practical working allow in ordinary use, and the results shown were such as actual working contractors could depend upon under the conditions which they have to work. You may compile two or three closely printed foolscap sheets of conditions and have these embodied in the contract, but neither the contractor nor the manufacturer nor the timber men who supply the timber possess either the knowledge or the means to enable them to fulfil the terms. Through all my experience, I have never yet found the buyer who asked for such tests. On the other hand, I am continuously asked whether the timber in question is as strong as British oak, etc., a simple question simply answered, which Laslett has dealt with in a practical manner. A competent authority has estimated that the forests of Burma can produce 300,000 tons of pyinkado per annum without interfering with the prospect of future supplies, and this timber is one of the most valuable timbers the world produces. This is a striking illustration of the wealth of Burma and its forest resources.

The many difficulties which confront those who attempt to introduce into regular use any new unknown timber are so great and so varied, that those who are not conversant with the conditions would believe it to be impossible. They have, however, been so serious, that most of those who have attempted the experiment have either given it up or become ruined. The new timber is criticized by everyone; guarantees are asked for on all sides; people rise up from all quarters to attack it, by the principals, by the contractor, and if at last the poor promoter is able to come through with the work, it is examined as with a microscope, and all kinds of pains and penalties are proposed to be inflicted for each trifling defect. Of work, on the other hand, carried out under the sacred names of "oak," "mahogany," or "walnut," and the worst faults happening,

little is heard. Modern conditions under which buildings are now finished make it impossible to keep woodwork without defect, and timber will shrink or swell, or sometimes warp and twist in a greater or less degree. The new timbers of India and Burma, however, are affected in this manner, on the whole, less than any others, and notwithstanding the difficulties with which the introduction of these woods has had to battle during the course of the last three years, much has been accomplished, and it is gratifying to realize that very many of the timbers have become quite well known and, especially of late, largely used in numerous important buildings, including many of a public character ; so that with many of the kinds, instead of it now being difficult to find a demand, we have been more troubled of late in assuring supplies.

The visitor entering the Burma building by the main entrance on the west side will find, on the right hand, immediately inside the door, a double-fronted shop in Burma mahogany, polished in its natural colour, with the window enclosures of Burma padauk, and a flooring of parquet in mulberry-wood to the stall-boards. Facing this, on the left hand, is a small shop also in Burma mahogany, stained and polished a dark colour ; the enclosure to the window is fabric covered, and the parquet flooring to the stall-board is Burma padauk. Passing along to the centre of the building, the visitor notices at the meeting of the main central pathways four shops forming a circus, each standing at an angle, with a concave segmental front facing the centre and return ends to the pathways, those on the east side being extended to the next gangway. The shop standing in the south-west angle is of laurel-wood, selected of a dark colour, with the enclosure of laurel-wood selected of a light colour, and the parquet flooring to stall-board is of silver greywood. The shop standing in the north-west angle is of Burma padauk with an enclosure of pyinma and parquet of gurjun-wood. In the south-east angle is a shop-front of pyinma with an enclosure of tulip-wood and parquet

of koko. In the north-east angle the shop-front is of Burma tulip-wood with an enclosure of Burma mahogany and parquet of tulip-wood.

On the right-hand side of the main entrance also the visitor will find an exhibition bank in Burma padauk, the first time this wood has been used in important decorative woodwork, and it is not too much to say that it gives a very lovely effect, equalling, if not surpassing, anything that has been produced in the finest woods which can be found. Inside this room is a bank manager's office, furnished and panelled with the same wood. Adjoining the bank is a dining-room, furnished and panelled in Burma laurel-wood, with chairs of an old Chippendale pattern in Burma mahogany. Leading from the dining-room is a ladies' boudoir in French style, furnished and panelled in Burma mahogany in natural colour. Adjoining the boudoir is a drawing-room, panelled with Burma haldu, or, as it is called in Burma, "knaw." The furniture in this room is Burma mahogany. In other places will be found many illustrations of various woods in different articles of furniture and use. In the grounds is an English belfry, made in Burma pyinkado, with a wheel in yellow mulberry, and a waterwharf front, also in pyinkado, showing piles, camp sheeting, and capping. The Burma pavilion has been established, and is being taken care of by Mr. A. Rodger, O.B.E., who has had a very long term of service in the Forest Department in Burma, and who has been kind enough to be with us here this afternoon, and who is showing in this section a highly interesting and instructive silvicultural and forest by-products exhibit.

Mr. Howard then proceeded to show a most interesting series of pictures with explanatory comments.

DISCUSSION ON THE FOREGOING PAPER

A MEETING of the East India Association was held at Carpenters' Hall, Throgmorton Avenue, E.C., on Monday, April 14, 1924, when a paper was read by Alexander Howard, Esq., on "The Forests and Timbers of Burma." A. Rodger, Esq., O.B.E., was in the chair, and the following ladies and gentlemen, amongst others, were present: Sir Syed Ali Iman, K.C.S.I., Sir Krishna G. Gupta, K.C.S.I., Sir John G. Cumming, K.C.I.E., C.S.I., Sir Patrick Fagan, K.C.I.E., C.S.I., Sir George W. Shaw, C.S.I., Sir William Ovens Clark, Sir Charles Armstrong, Sir Francis Oldfield, Sir Joseph H. Stone, C.I.E., Lady Kensington, Mr. F. H. Brown, C.I.E., Dr. S. Kapadia, Mrs. White, Mr. W. Wallace, Mr. E. C. Emerson, Mr. Henry Hall, Mr. W. Rayner, Mrs. Johnstone, Mr. B. W. Perkins, Major G. Gilbertson, Mr. Storey, Mr. Maung Tin, Mr. Maung Ba Hmu, Miss Eleanor Whitehead, Miss Mary Maitland, Mrs. Ernest Howard, Mrs. Lofthouse, Mr. Ernest Howard, Mr. L. V. Callender, Miss V. Rice, Miss M. Stephens, Mr. H. Hamel Smith, Mr. F. J. P. Richter, Mr. W. Rayner, Mr. Eric Murray, Mr. W. W. Lance, Mr. R. C. Watson, Mrs. and Miss Wilmot Corfield, Miss Partridge, Mr. P. Naw, Mr. S. J. Sastry, Mr. W. H. Lambourne, Mr. G. M. Ryan, Mr. R. G. Gadsby, Mr. O. J. McFarlane, Mr. D. Greenwood, Mr. J. S. Dhunjibhoy, Mr. John C. Nicholson, Mrs. Martley, Mr. and Mrs. F. J. Branthwaite, Dr. S. Nath, Mr. T. H. S. Goddard, Mr. L. V. Edwards, Mr. T. B. Hanson, Mr. and Mrs. A. B. Thomas, Miss G. Grimsey, Mr. J. P. Longman, Mr. H. D. Searles-Wood, Mr. Francis, and Mr. Stanley P. Rice, Hon. Secretary.

On the motion of Mr. STANLEY RICE, a hearty vote of thanks was unanimously accorded to the Court of the Carpenters' Company for the use of the Hall.

Mr. STANLEY RICE stated that Professor Richards, M.P., had been prevented from presiding owing to his Parliamentary duties, and that Mr. Rodger had kindly consented to take his place.

The CHAIRMAN: Ladies and gentlemen, as Professor Richards has not been able to be present here to-day, it is my privilege to introduce to you Mr. Howard, who is the head of one of the largest timber firms in London, which firm is the agent for the Forest Department of India and Burma. He, as we all know, is the author of a well-known book on the timbers of the world, and he has for a long time past taken a great interest in tropical hard woods, on which he is a well-known authority. During the last few years he has interested himself in the hard woods of the forests of India and Burma, and it is principally through his efforts that a number of these woods have become well known in the markets of England and other countries.

The paper was then read.

The CHAIRMAN: Ladies and gentlemen, I am sure we are much

indebted to Mr. Howard for his paper and for the beautiful pictures of the Burmese forests which he has shown to us. One point he mentioned I think might be enlarged upon—that is, the part which the elephants play out there. We have thousands of them scattered all over the Province, and we use them for transport and for extracting timber. Practically all the logs are brought to the floating streams by the elephants. In the mills they carry logs and planks, and dodge the posts in the mills in a most intelligent way. There is a story of an elephant which I have always thought was a great testimony to their intelligence. In the forests to the south of Mandalay there was a big store of rice in a hut, which was used by the coolies and drivers of elephants for their food. At night our custom is to put iron shackles on the elephants and turn them out to graze, and in order that they may be found in the morning every elephant wears an enormous wooden bell which makes a noise which can be heard a considerable distance off. The rice having been missed, the coolies set a watch; they did not hear anything, but in the middle of the night they saw this tusker elephant coming up the bed of the stream to raid the hut, and he was holding his wooden bell with his trunk, so that it would not be heard. (Laughter.)

The LECTURER, in reply to questions, said that the cost of woods from India and Burma was very much less than the cost of the woods which were ordinarily made use of—for instance, Honduras mahogany, which might be said to cost anything from 10s. to 18s. per foot cube, while the cost of the Burma mahogany was much less. One great disaster to Burma, though at the same time a great benefit, was that it produced teak. People had concentrated upon teak to the disadvantage of the rest of the timbers.

On the motion of the CHAIRMAN, a hearty vote of thanks was unanimously accorded to the Lecturer.

A hearty vote of thanks was also unanimously accorded to the Chairman for presiding.

The CHAIRMAN having thanked the meeting, the proceedings terminated.

Sir ALFRED CHATTERTON writes that he was greatly interested in Mr. Howard's paper on "The Forests and Timbers of Burma." In the nineties, when he was at the Engineering College in Madras, he had at his disposal a 100-ton testing machine of the Wicksteed type, built by Messrs. Joshua Buckton and Co., of Leeds. For bending tests on timber it was fitted with a special pressure foot which distributed the load uniformly over the central 3 inches of the span, and thus avoided the local deformation which would have inevitably occurred when the specimens under test were of large size and carried heavy loads. When the East Coast Railway between Madras and Bezwada was under construction he made a number of tests of Pyinkado cut from a sleeper sent to him by the Engineer-in-Chief of the line. When the sleeper arrived the wood was quite soft and green, and was easily worked by plane and chisel and could be finished to a fine surface. After a time the wood became exceedingly

hard and proved difficult to handle, though it still contained a very appreciable quantity of a resinous sap and weighed 74·3 lbs. per cubic foot. When it had hardened he made a large number of bending, crushing, and tensile tests, and the following data fairly represent the results obtained. A bending test was made on an equivalent span of 6 feet, and the cross-section of the beam was: Depth, 9·743 inches; breadth, 4·812 inches. The breaking load was 22·98 tons, giving a modulus of rupture of 677 lbs. and a modulus of elasticity of 1,856,360 lbs. A cube of $4\frac{3}{4}$ -inch side carried a load of 82·79 tons, and possessed a modulus of elasticity in compression of 2,878,500 lbs. A strut 29·96 inches long, with a cross-section of 4·485 by 4·475 inches, carried a load of 67·67 tons. The tensile tests were made on specimens, approximately $2\frac{1}{2}$ inches by $\frac{1}{2}$ -inch cross-section, which carried a load of 7·113 tons per square inch, with a modulus of elasticity of 2,172,000 lbs. Other experiments were made on various specimens of Indian Pyinkado, but in no case were the results of the tests as high as those obtained from the Burmese wood.

A great many of the recorded tests on the strength and stiffness of timber have been made on specimens much too small, and the results obtained have been nearly always greatly in excess of those from large-scale experiments. For most practical purposes he thought that the moduli of elasticity which depended on the stiffness of timber yielded a more useful standard of comparison between different woods than the ultimate breaking stress. The Pyinkado sleepers were laid in the Madras-Bezwada Railway nearly thirty years ago, and it was possible that the railway records would furnish useful information regarding their desirability. He noticed that the cost of labour on the wharf at Bow Creek had been no more than if pitch pine had been used, from which he presumed that the Pyinkado had all been cut to the size required in the green state before it had hardened. Engineers would undoubtedly be glad to know whether this was so or not; also for how long Pyinkado was easy to work after it had been felled. When he last had occasion to enquire into the economics of the Burma forests he found that the commercial exploitation about 1917 amounted to no more than one cubic foot of timber per acre per annum of the reserved forest area. What the annual increment may be is not at all accurately known, but it must be at least ten times the amount at present removed, so that it is easy to understand what a vast revenue ultimately will be derived from the Burma forests when a market has been found for the available timber and adequate means of transport have been provided. The Indian forester, neither in India or Burma, can count on the assistance of snow in facilitating the extraction of timber, and in Burma, at any rate, he has mainly to rely on elephants, of whom thousands are employed, but they are costly to maintain and have a working life of not more than twenty-five years. In Burma teak can be floated down to Rangoon, but the loss on the way is considerable and the river offers little advantage as a means of transport for timbers like Pyinkado, which are much heavier than water. For a long time to come the forests of Burma will easily meet the demands likely to be made on them, but it is necessary to look ahead a very long way, and

he thought that a good deal of evidence had accumulated to the effect that plantations yielded a very high annual increment, and that if the cost of establishing them could not readily be met from the surplus annual revenue they might well be started with the aid of long-term loans.

For some years he had been in charge of the School of Arts, Madras, where a great deal of cabinet work and wood-carving was carried on, and he had availed himself of the opportunity to experiment with such of the ornamental timbers of India and Burma as he could obtain. The results were in many cases very encouraging, but some of the woods were highly mineralized and rapidly took the edge off the tools. He remembered once receiving a log of rosewood (*Dalbergia latifolia*) in which all the annual rings were filled with deposits of lime, rendering the wood quite useless. In view of the splendid work done by Mr. Howard's firm during the last three years to demonstrate the qualities of Indian timbers, it would be futile to dwell upon his own experiments of about twenty years ago, except to draw attention to the fact that there were many beautiful woods to be obtained in the South of India, especially in the forests on the Western Ghats. Bad joinery and the use of unseasoned timber had in the past contributed not a little to the slight estimation in which the woods of India were held; he doubted not that with the elimination of these detrimental factors there would be a good market for them in the future, and he desired to congratulate Mr. Howard on the very great progress he had already made.

THE SUKKUR BARRAGE IRRIGATION PROJECT, 1920.

A CRITICISM OF ITS LEADING FEATURES.

BY F. WRIGHT

(Late Chief Engineer in Sind).

IN the north-west corner of India, in the vicinity of Afghanistan, Baluchistan, and Arabia, is the great plain of Sind, one of the flattest and most rainless regions in the world. Yet it were wrong to think of this Province as a barren, unpopulated desert. It is fairly populated. Roughly half of it, an area more than three times the size of Wales, is a fertile alluvium, deposited, during ages, by the Indus, which traverses it before entering the Arabian Sea. From time immemorial the inhabitants have succeeded in growing a variety of valuable crops, so that famine is unknown to them, and it is recognized that, with sufficient cultivators and an ample supply of water, practically every part of this alluvial tract can be brought under the plough.

But how is the water obtained? The Indus, like the Nile and other great streams rising in snowy mountains, carries an immensely increased volume of water when the snows melt, so that during the summer months its discharge has been close on to 1,000,000 cubic feet a second, which is fifty times as great as its winter discharge. The cultivation of crops is made possible by this never-failing rise; for the high level of the water enables it to run into shallow canals cut into the banks of the river, and to flow on to the arid lands beyond. This period of high water lasts between the beginning of June and the middle of September and is known as the inundation season—*i.e.*, the season of floods—when the so-called kharif crops, rice, cotton, and millets, are sown and irrigated from the canals. During the winter

months, or the rabi season, when the Indus flows in a small volume, and consequently at a low level, it is obvious that very little cultivation is possible because water has to be lifted on to the lands at considerable expense.

Now a project for the better irrigation of Sind from a barrage at Sukkur has been sanctioned recently, and work was commenced last October, when H.E. the Governor of Bombay laid the foundation-stone.

In this paper that scheme is discussed under these heads :

Scope of the project.

The Indus as we know it.

Disturbing influence of a barrage on such a river.

The importance of silt in canal-carried water.

Barrage canals too small.

The bearing of race characteristics on the design of new canals.

Sale of land for financing the scheme.

The Sutlej Valley project.

How the scheme will affect Indus floods.

Population : the Punjab and Sind contrasted.

SCOPE OF THE SCHEME.

The cardinal feature of the project is the construction of a weir, with gates, across the Indus a mile or so below the town of Sukkur. The weir, or barrage, when its openings are closed, will create a very large reservoir, which will serve seven canals to be constructed with their headworks immediately above the barrage. These canals can be divided into two classes : those that are wholly new, and those that are merely feeders to established systems of irrigation.

On the left, or east, bank it is intended to excavate a canal that will be one of the largest in the world—the Rohri Canal—which will distribute water over the magnificent cotton-growing plains of the greater part of the Nawabshah and Hyderabad collectorates. On each side of this two smaller feeding channels will be constructed

to link up with the old canals in the territory of His Highness the Mir of Khairpur. The latter are necessary, because the Rohri Canal, passing through the middle of the irrigable portion of Khairpur State, will intercept the principal inundation systems now existing there. These feeders, with their headworks, will be entirely at the disposal of the State authorities, who will have no reason, consequently, to want water from the Rohri Canal, which will flow on, untapped, until it reaches British territory. On the left bank also a large feeding channel will deliver supplies into the Eastern Nara, which leads water to the important Jamrao, Mithrao, and Thar canal areas that border on the Indian desert in east Sind.

On the other bank, the right one, as far south as Sehwan, where in Sind the Indus first meets hill spurs stretching east from the uplands of Khelat, there lies a noteworthy rice-growing district, situated principally within the confines of the Larkana collectorate, to which, at present, three great canals, the Sukkur, the Ghar, and the Western Nara, supply water to an extent acknowledged by all competent authorities to be satisfactory. For that area, however, a new canal is to be made, that will flow only in the summer, and its special purpose is the irrigation of the more compact part of the rice zone, the "Garden of Sind," as it is called, the zone of the Ghar canal which already irrigates 350,000 acres, and yields a return of 100 per cent. on capital hitherto spent; then another canal will be constructed to go farther afield, and deliver perennial water to the southern limits; and a third, also perennial, to supply water to any lands which can be commanded in the belt north and west of the rice zone. At first sight the advantage of changing existing methods of irrigation in Larkana is not evident, but the idea of the enterprise seems to be prompted by the fear that the withdrawals by the new Rohri Canal will affect adversely the supplies hitherto received by the Ghar and Western Nara canals in particular.

EXPECTATIONS

The entire system is estimated to cost £12,250,000, and to involve the construction and maintenance of 5,300 miles of irrigation channels. The work is expected to be completed in twelve years, and eventually to show a return of 14 per cent. It was recently stated also, in an article by Sir Montagu Webb in the *London Press*, that the value of the crops would exceed £13,000,000 annually.

All this is refreshingly cheerful. But there are a number of very weighty circumstances connected with the scheme which have received insufficient consideration, or none at all.

THE INDUS

The most important of these is the effect upon the Indus of a weir built across it to interfere with its flow during eight or nine months annually, and particularly one at Sukkur. For here the river does a strange thing. After travelling for 500 miles from Kalabagh, at which point it issues from the hills of the Salt Range, skirting Dera Ismail Khan, Dera Ghazi Khan, and Mithankot, where the waters of the five rivers join it, and almost always flowing in a broad alluvial valley, it deliberately passes through comparatively narrow, but deep, gaps near the end of the isolated Aror ridge—gaps, all rocky, that have Sukkur on one side, Rohri on the other, and the island of Bukkur between. Long before it reaches this locality, which an increase in velocity induced by the narrows probably has helped it for some centuries to continue to traverse, it has changed its character. From consisting often of a maze of interlacing courses that flow for the most part in a valley never more than ten miles wide, with many intermediate islands, and oscillating between wall-like bordering banks at least 30 feet high, it has altered to a single-coursed waterway, with but few islands, that flows not in a valley, but on the crest or close to the crest of a distinct ridge. Because of this formation its margins have here to be confined by

great earthen embankments, which on the west side extend continuously for nearly eighty miles from the frontier of Sind at Kashmor to the rocks outcropping at Sukkur, and again for another 130 miles, almost without interruption, from Sukkur to Sehwan.

These "bunds," as they are called, have been built to prevent a general inundation over a wide plain that slopes downwards and away from the river for many miles inland towards the Baluchistan foot-hills. They stand, moreover, to enable controlled irrigation to be conducted from the summer-flowing canals that lie protected behind them. Without doubt, also, they have had the effect of encouraging this ever muddy river to raise itself more and more on the ridge upon which it flows. That is a state of affairs very definitely seen in the reaches below Kotri, which is 280 miles nearer the sea than Sukkur.

Conditioned in this fashion, it is well recognized that the Indus for many miles above and below Sukkur is in most unstable equilibrium, for it is always eroding its banks at one or more points, only to pile up what it has eaten away at others farther down its course. Change in the position and character of the water-channels proceeds ceaselessly on the ridge, and the engineers are occupied at some place or other every year in constructing new bunds or strengthening existing ones to prepare for the onslaughts which must inevitably be met.

AVULSION

Now, it is a river such as I describe that they are proposing to obstruct with a weir which is to pond it up for irrigation purposes. For long unbroken periods annually this weir will greatly retard, and, indeed, even annihilate, the flow in the gorge at Bukkur. The regime of an unstable stream will be changed totally at the most critical point in its whole course. Silt will fall all over the lake, and shoals and sandbanks will be created where the flowing river enters at the head. Then will come the time when the gates of the weir will be opened to prepare the

river for the annual rise in June. Anything may occur. Clear runs for a strong stream towards the gorge may be blocked, and a sandbank in an unfortunate place may have the effect of setting up active and disastrous erosion or driving the rising river against and through some point in the line of earthen flood embankments into the low lands that lie continuously under the western hills. If that happens, there are many valleys to the west and south of Sukkur by which the flood can find its way back to the river, now reduced in height because of the great body of water leaving it upstream; reduced in height, also, because perchance the barrage gates have not or cannot be raised. The dry banks that oppose its advance may prove no sufficient barriers to the completion of the avulsion that will leave Sukkur and all its works—its great railway bridge, its great barrage, and its many canal heads—to stand out uselessly in an area of sandy desolation.

SILTLESS WATER

So much for the possibility of change of course following any notable meddling with the river at Sukkur. The barrage has yet other adverse potentialities. For several months annually it will convert part of the Indus into an immense lake that sometimes may be more than thirty miles in length. That lake will not store muddy water of the usual description that flows in the river, but water that is comparatively free of sediment. It is such clarified water which the promoters of the scheme for improving Sind irrigation are going to turn on to the lands to raise the 3,000,000 acres of *new* winter crops hopefully anticipated, and in great part counted upon, to make the project pay. The siltless water will be without the fertilizing agents—nitrates, phosphates, and potash—that give plants their food. For a season or so virgin lands may go without such necessary nourishment. Then disaster, and a Sind ruined and soured will be the result. For the soil of this Province must have its nutritive silt if

it is to continue to yield its crops of corn, more especially as the Sindhi cultivator hardly ever resorts to artificial manuring.

BARRAGE CANALS TOO SMALL

Next, let me turn to the proposals made for improving the summer irrigation of the area commanded by the barrage. I shall commence by explaining that when an irrigation engineer describes the quantity of water a canal is carrying, he says its discharge is so many cusecs or cubic feet a second. Canals are designed to admit not only the quantity of water that will flow in sufficiency on to tilled and sown ground, but also the quantity that inevitably will be lost by absorption through the bed and sides of all the water-channels it must traverse before the fields are reached. Now what is the quantity of water at present taken from the Indus in the summer to irrigate the area to be affected by the Sukkur scheme? It is a quantity that fluctuates considerably, but still it can be averaged. We find from the various existing canals, great and small, this average abstraction is 55,000 cusecs, and that it irrigates 1,720,000 acres of kharif crops; thus each cusec irrigates about 31 acres. It is true that here and there water is superabundant and some is wasted; and elsewhere, particularly where ill-aligned, badly graded canals exist, water is seldom sufficient, a state of affairs that new, scientifically designed canals must improve. For all that you will probably be surprised to hear that for this same season, in this very region in Sind, the promoters of the Sukkur barrage scheme have decided to draw off a *maximum* of only 46,000 cusecs from a river now in flood and carrying practically an unlimited volume for irrigation purposes, and yet they appear to expect full-eared crops—16 anna crops, as we say—not only from the old area, but also from an additional area of 836,000 acres—in all 2,556,000 acres. They look for one cusec to irrigate 56 acres kharif, or nearly twice the number it has been doing up to this time. They look for their new irrigation to assure the cropping

of 49 per cent. more land when they have at their disposal at least 16 per cent. less water. Now, remembering what the Sind climate is, and the conservative habits of the people, who is so bold as to hope that this can be done?

Then, further, from experiments in this dry land it has been established that throughout its period of growth rice requires to be flooded with 4 or 5 inches of water one day in every five when there is no rain to help things on. The best the new canals bearing water for this crop can do is to give 1½-inch floodings at five-day intervals, which, one can readily see, is entirely inadequate.

I am convinced that examination into the whole subject of the canals to be made at Sukkur will bear me out in my contention that they are of insufficient capacity. Their principal function is to supply water for the summer crops, and, as has been shown already, their designed capacity compares very unfavourably even with the present *average* consumption of water during the summer. But that is not all. I go further and point out that canals in Sind should have such a margin of extra capacity as will enable them efficiently to meet, without any reliance on the most precarious rainfall of the country, the maximum demand which occurs when practically the whole area under cultivation needs water simultaneously, and this obviously calls for a very substantial increase of carrying capacity above that required for the average supply. In this regard, I am sure, I shall be supported by all engineers with experience of Indian irrigation. The new canals, then, will be too small for the average requirements and far too small for the maximum requirements.

RACE CHARACTERISTICS

It must be borne in mind that the cultivators of Sind, as pointed out already, have been mostly kharif cultivators from time immemorial. Their foods are rice, jowari, and bajri, all summer-raised grains, and they do not eat wheat, which is a corn of the rabi, or winter, season. The

Sindhi cultivator is intensely conservative in this matter. He is also a thriftless person, disinclined to work so long as he has rice and millets in his granary and a little cash coming from the cotton he has raised and sold, so that even where winter water is to be had easily, he appears to be unconscious of the opportunities it affords. It is not such a cultivator who is going to change his ways. Instinctively he knows the value of silt-laden water—water, that by its very nature, some say, is worth an extra fifteen shillings an acre—and he will be right to protest against the restriction of its supply that this Sukkur scheme enforces through its fundamental necessity of having its canals designed on lines that are the most economical when conditions are ideal—perennial canals, that is to say, that will carry supplies for both summer and winter growing crops; supplies, moreover, that in Sind circumstances will be anything up to 50 per cent. too little in the summer, and that will be quite as much too great for the demands likely to be made upon them in the winter.

SALE OF LANDS SCHEME

A somewhat unusual feature of the project under discussion is the proposal to finance it partly from the proceeds of the sale of Government lands, to be auctioned in suitable parcels from time to time as money be required. This expedient—clever, even if complex—has been put forward hopefully within the last few months, and assuredly should be accorded the critical examination not yet given to it, and which its perilous character calls for. It is put forth, of course, to meet the Secretary of State's instructions that the project be shown to be productive, and that suitable means for financing it be discovered. Disposing of waste land, with rights of water, merits favourable consideration provided there is no shadow of doubt that all the persons already holding land are guaranteed an ample supply of water for their properties. No such guarantee is evident, rather the contrary. To sell lands in positions that will be

advantageously situated when new canals come into being, and that can get trustworthy supplies consequently, will not be an equitable policy if, thereby, at any time, the water privileges of old landholders are jeopardized. There is great risk, therefore, of hardships arising and discontent developing on this account alone. Sale of land to persons without rights of water is manifestly outside contemplation in a country where all agriculture depends on irrigation. If anyone be found foolish enough to buy land with uncertainty as to water, refunding the price paid and meeting claims for compensation may be the only course open to the Government of the future, which may well prove to be embarrassed enough by the load of debt which the Sukkur scheme will have caused. And, given the best of circumstances, it may be asked, who is there to buy these lands? Not the local proprietors or zamindars, for they are of a class notoriously improvident. Few of them have money for any extension of holdings already quite unwieldy. Those with the money in Sind are not the village-dwelling zamindars, but the merchants and lawyers of the towns, who are unlikely, from their temperament and training, ever to be agriculturists themselves. True, they can hire field labourers—*haris*, as they are called—but since the supply of these is very limited, they will do so at the expense of old-established yeomen whose lands will be uncultivated in consequence, and what the State will gain in one direction it will lose in another.

Then there is another contingency that may arise from the sale of lands to persons of the absentee landlord description. These people will have acquired virgin land with a view to make all they can out of it, and, consequently, they will work it without rest for a few seasons until its natural fertility is exhausted, when, having benefited sufficiently from their speculation, possibly, they will shuffle out of any further responsibilities, artificial manuring, as already mentioned, not being customary in Sind. But, most important of all, with the projected canals too small for the

areas now irrigated annually, and that fact even dimly recognized by prospective buyers, the scheme for the selling of any land at all should collapse at its very inception.

All these things, then, are dangers which imply, at least, our proceeding with the greatest caution and care.

SUTLEJ VALLEY PROJECT BOGEY

In an address which His Excellency the Governor of Bombay delivered to a deputation of Sind zamindars at Poona in August, 1922, he is reported to have said: "If the barrage is not constructed, the Sutlej Valley project will undoubtedly affect Sind prejudicially to a certain extent. It is difficult to say to what extent Sind will be prejudiced, but the rise of the river may be retarded from ten to twelve days at the beginning of the inundation, and the fall may be accelerated to an equal extent at the end of the inundation. That is to say, the total duration of the inundation may be reduced by from twenty to twenty-four days." Here, I think, we have the expression of a fear that in hot haste clinched the decision in favour of a barrage. The period of the inundation, it is stated, may be curtailed by twenty to twenty-four days if a project for improved irrigation in the Sutlej Valley comes to maturity.

Now the Sutlej project is a proposal to build four weirs across that river, which will render certain groups of old inundation canals immune from the seasonal fluctuations in water level; the construction of new perennial canals to irrigate uplands now lying waste is also contemplated. The project, in maturity, is expected to lead to the abstraction of a maximum of 38,000 cusecs from the river, and the kharif requirements will probably not exceed an average of 30,000 cusecs, part of which only will represent a new depletion, since allowance must be made for the average quantity taken up to now annually, for the existing inundation canals, and that is estimated to be about 12,500 cusecs. That some water seeps or oozes back to river valleys

from lands irrigated higher up is well understood. The combined effect of this oozing from the irrigated plains of the Chenab and Jhelum will tend to diminish the losses that the Sutlej Valley withdrawals will occasion, until a part of the latter water, some years afterwards, may also trickle back in many small springs to a river, and the Panjnad and the Indus are there to receive them. Giving this seepage phenomenon due weight then, and bearing in mind that when large local abstractions take place in alluvial rivers there develop shoalings, with a general elevation of river-bed, it may be assumed with safety that the Sutlej Valley project, if it affects the Indus at Sukkur at all, will not do so more seriously than to diminish at first its discharge by 10,000 cusecs, a volume of loss that will decrease steadily every year as the effects of the rising water table in the Punjab, as a whole, become more evident in the growing seepage to all the rivers on that account; a volume of loss that is likely, indeed, to have disappeared entirely long before the canals of the Sukkur project shall have become developed so far as to be in need of their designed full supplies of water. But, however that may be, the temporary disappearance of 10,000 cusecs from the river, when its total discharge is 180,000 cusecs, as it is generally at the beginning and end of the inundation season proper, will not shorten the usual period of high water in a normal year by more than a couple of days when the river is rising in June, and more than a day when the river is falling rapidly at the end of September. This estimate of three days is very different from Sir George Lloyd's "twenty to twenty-four days."

RIVER FLOODS

When considering the Barrage and also the Sutlej Valley projects, responsible officials in Bombay—for Sind is politically of Bombay though geographically of the Punjab—have failed to recognize the need for meeting the inevitable increases in the heights of river floods once perennial canals, with smaller aggregate discharging capacities, come to

supersede the larger bulk of inundation canals. Throughout a greater part of the Indus in Sind, scores of the latter, with their inherent power to convey and disperse usefully great quantities of water inland, will disappear as safety-valves for floods, and the few new canals at Sukkur will afford no relief whatever to the overcharged river. In the project no provision has been made to counter the quicker rising and higher waters that will come up against the long lines of protective embankments to be found almost everywhere in the Province, embankments whose importance will be greater than ever since, hypothetically, such vast new areas of crops will have to be defended. The putting of all these embankments into a thoroughly reliable condition, the building of new banks to protect lands that the higher river may flood, and the providing of large reserves of material, with the trained staff to use it expeditiously in emergencies, I estimate will cost at least £3,000,000.

To the design for the barrage and the design for the headworks of the new canals, as published, I shall not refer. Eminent engineers can explain how faulty these are. Under some conditions they make for floods, under others for silt accumulations in the great canals with corresponding insufficiency of water-way. The subject is highly technical and unsuitable, consequently, for discussion in a general paper of this nature.

The latest news of the Sutlej Valley project, which was begun two years ago, is that extensively revised and enhanced estimates are found necessary to cover expenditure and changes of costly description that have been developing as the work has been advancing. It is the firm opinion of several competent authorities that the rates for the work for the Sukkur scheme must be reconsidered and substantially advanced also; knowing the difficulties of getting large engineering operations conducted in Sind, it is my own view that the project will cost nearly twice the sum the sanctioned estimate amounts to—£20,000,000 instead of £12,250,000.

POPULATION: THE PUNJAB AND SIND CONTRASTED

It will be conceded that when a great scheme for extensive new irrigation is being dealt with, the question of man-power demands scrutiny. Man-power must always be a prime consideration, for machinery will never replace human labour to any appreciable degree in agricultural India. People may cite the case of the Punjab to prove how deserts become populated once assured irrigation is established. But present conditions in Sind are quite unlike those that ruled in the Punjab before the Lower Chenab Canal was made perennial (1892) and the Triple Canals project reached completion (1917). The Punjab had its immense empty plains with thickly populated—even congested—agricultural areas lying just beyond. People for the new lands were at hand; all of them of ideal stock, for agriculture was their calling, and a common descent gave them the cohesion, so desirable when the plantation of colonies was the end in view. Then, in convenient groups, each forming a unit, these willing people founded villages on selected sites in the new areas, and thus simultaneously, with the coming of water for the first time, came also the husbandmen who knew best how to use it. Irrigable Sind, however, has no such vast areas of empty places, except in the Indus delta, which the Sukkur project does not touch. An aeroplane passing in August over Upper and Central Sind will have everywhere below it green streaks of varying width—sometimes thin, sometimes swelling far out into the brown—that mark where crops are growing. All the brown places one may see, however, are not Government waste lands; on the contrary, the greater part is in the occupation of local zamindars. They do not cultivate these brown places regularly, but do so occasionally to avoid forfeiture under the land rules in force in the province. Such is Sind, and it has no congested places to tap for agricultural labour, neither can it get this labour from the deserts to the west, the east, or the north, from Baluchistan, or Jaisalmer, or Bahawalpur, nor can

Cutch, to the south-east, provide people of the right type. Even if foreigners from neighbouring states were available, the Sindhi would resent very strongly their intrusion as permanent residents.

Let us discuss the population statistics, and as Khairpur is a state that stands out prominently in the new irrigation proposals for the province, it will be convenient to include it in Sind.

The census of 1872 was the earliest, and it returned Sind and Khairpur with a total of 2,333,527 persons. This population increased at a diminishing rate every decennium to 1911, when it was 3,737,223. In 1921, however, it had decreased to 3,472,508.

Now, though the world-wide influenza epidemic at the end of 1918 was very severe in Sind, it cannot be responsible for the falling off from 4,000,000, which the figures of former censuses foreshadowed. For, taking the mortality figures reported for the months of the visitation, and assuming that those who died were still alive in March, 1921, a census so reconstructed would total 3,675,000, and that is a figure appreciably short of the 1911 total. And the decrease in the rural population is more accentuated by the fact that the population of the large towns is increasing in a marked degree; for instance, the population of Karachi now is 42 per cent. greater than it was in 1911.

A notable fact brought to light in the last census is that less than 20 per cent. of the population participates actively in agriculture, although 58 per cent. of it is classed as directly connected with this most important industry.

All of which goes to show that the man-power problem is one of outstanding significance in any plans for augmenting irrigation in Sind on a large scale, and it is one that has been most unaccountably ignored.

CONCLUSIONS

The truth of the matter is, the essential features of Sind—its river, its soil, its climate, its rainfall, and its population so diverse in constitution—have not been given the careful

consideration and analysis so supremely necessary before embarking upon such a scheme as harnessing the river at one place, and then staking the whole future of the irrigation of the Province—indeed, its very life—on the success of that enterprise and the systems of giant canals it gives birth to and nourishes. The eggs, it seems, are to be all in one basket. What is more, many existing canals are to be scrapped, which is to burn boats that are still seaworthy. And such, I venture to assert, is hardly a policy which can appeal to prudent minds.

The river is unstable; the soil, with its high water table, is liable to water-logging, and the existence of immense areas of fine sand—hour-glass sand—favours prodigious losses through absorption; the climate, for months together, is one of scorching dry winds resulting in great evaporation; the rains are less than anywhere else in India, and their coming may be untimely and destructive as often as beneficial; the population, outside mercantile or educational centres like Karachi, Hyderabad, Shikarpur, and Sukkur, is scanty and declining.

HOPE

Almost all I have said is destructive criticism. And it may be asked fairly, "What are your proposals for bettering things in Sind?" My answer is, "Extend inundation irrigation to the utmost; aim at improvements that will give what the people want—namely, plenty of rice and cotton." Great things can be done with the bounteous supplies carried in the river for at least four months annually. This subject has ceased to be explored officially, ever since the dazzling idea of a barrage came to bemuse sane counsels. For the last twenty years astonishingly little progress has been made in improving in other ways the irrigation of the Province because everything has had to give way to this ambitious new project. Yet there are some who, of their own initiative, have not remained content with this inactive state of affairs, and one of these, a senior

irrigation officer with imagination, recently told me he had been effecting so many small improvements, at a comparatively trifling cost, that a barrage devotee prayed him to desist since his good work was upsetting the kind of statistics that it was desirable to present for the justification of the Sukkur scheme.

Such being the circumstances, then, I venture to urge that there is very good reason to press for an enquiry into the great irrigation question with which I have been dealing. In reviewing the needs of Sind and how to meet them, experts may show that vast sums of money and years of misdirected labour can be saved, the burden of the tax-payer being lightened in a corresponding degree. Up to this time irrigation engineers have achieved wonderful things in India, and their good name now must not be jeopardized for the sake of an experiment of unprecedented magnitude.

DISCUSSION ON THE FOREGOING PAPER

A MEETING of the East India Association was held at Caxton Hall, Westminster, S.W., on Monday, May 12, 1924, at which a paper was read by Mr. Frederick Wright (late Chief Engineer in Sind) entitled: "The Sukkur Barrage Project, 1920." The Right Hon. Lord Lamington, G.C.M.G., G.C.I.E., was in the chair, and the following ladies and gentlemen, amongst others, were present: The Right Hon. Lord Pentland, G.C.S.I., G.C.I.E., General Sir Edmund Barrow, G.C.B., G.C.S.I., Sir John O. Miller, K.C.S.I., Sir Raymond Barker, K.C.S.I., Sir Lionel Jacob, K.C.S.I., Sir John G. Cumming, K.C.I.E., C.S.I., Sir Charles Mules, C.S.I., Sir Alfred Chatterton, C.I.E., Sir Campbell W. Rhodes, C.B.E., Sir William Ovens Clarke, Sir Valentine Chirol, Mr. E. M. Proes, C.S.I., Mr. Alexander Porteous, C.I.E., Dr. Thomas Summers, C.I.E., Mr. F. H. Brown, C.I.E., Mr. F. W. Woods, C.I.E., Miss Scatcherd, Mr. J. Sladen, Mr. Bulaki Das, Mr. Lachman Singh, Mrs. A. M. T. Jackson, Rev. Dr. W. Stanton, Mr. A. Sabonadiere, Mr. F. S. Tabor, Mr. A. Howard, Colonel Warliker, Colonel and Mrs. A. S. Roberts, Mr. G. M. Ryan, Mr. Otto Rothfeld, Mrs. H. S. Lawrence, Mr. T. Seton, Mrs. F. Wright, Mr. H. B. Taylor, Miss Nina Corner, Mr. H. R. H. Wilkinson, Mr. Arnold Lupton, Mr. F. J. P. Richter, Mrs. J. W. Dick, Major J. W. Gilbertson, Mr. F. W. Brownrigg, Mrs. W. G. Martley, Mr. F. C. Channing, Mr. H. L. Leach, Mr. G. Scott Bremner, Mrs. Shuttleworth, Miss Partridge, Mr. E. J. Flight, Mr. Graham Betham, Miss Oakes, Mrs. R. J. Kent, Mr. Robert Giles, Mr. Edward Giles, and Mr. Stanley P. Rice, Hon. Secretary.

The CHAIRMAN: Ladies and Gentlemen,—It is now my pleasure to introduce the lecturer. It may be thought by many that we are dealing with and criticizing a dead horse; the decision of the Government of India has been given in favour of making this Sukkur scheme, and there is nothing more to be said. In that respect, no doubt, we are behind the times in hearing Mr. Wright's views to-day, but the reading of the paper had to be postponed owing to the General Election. I have twice presided at meetings in connection with this topic, and though no engineer myself, I have been largely influenced by the fact that at those meetings there was no voice raised on behalf of the scheme: it was all a one-sided discussion condemnatory of it. This experience influenced me in my attitude towards the scheme. Again, so far as I know, those who were talking on the subject were never entirely against the idea, but the whole point was that this extended irrigation could be obtained by improved canalization, and then only in the event of that method not

succeeding should this barrage be built. However, I have recently received information from Bombay that such a scheme would be ineffective, because if it were afterwards found necessary to build the barrage, all that had been done in the way of canalization would have been wasted, and would make it more difficult to execute. This argument naturally affected me, and therefore my views have been rather modified on that particular point, and I should like to hear more on it.

The paper deals more or less in connection with the financial proposals, and as to the amount of irrigation to be obtained. But I hope someone in the subsequent discussion will be able to give us further information on the point I have referred to as to why the attempt to develop irrigation by means of canals only should not have been first tried. No doubt to-day's meeting will differ from its predecessors, and that instead of having a one-sided discussion we shall have the pleasure of hearing those who are supporters of the scheme. I will now ask Mr. Wright to read his paper. I ought to have said that Mr. Wright was for a period of something like two and a half years Engineer-in-Chief in Sind.

The paper was then read.

The CHAIRMAN: Ladies and Gentlemen,—We have just listened to a paper of extreme interest, and I hope there may be some gentleman here who will be able to defend the scheme. The scheme may be perfectly sound, but I think that it is a great pity that with the greatest irrigation scheme presented to the world, the Government did not see fit to appoint a committee to give their advice upon it—some impartial body capable of giving an opinion upon it, which, if favourable, would have been accepted by the world.

However, the scheme has been commenced, and we shall be interested to hear the views of those who consider the project to be a sound scheme. There is one comment I would make. The Lecturer mentioned the possibility of silting up, and at the same time he talked of the water being absolutely clear—how does he explain the apparent inconsistency?

I will now ask Mrs. Lawrence, the wife of Mr. Lawrence, who has been for a long time an official in Sind, and who is himself unfortunately prevented from being here to-day, being laid up in hospital, to give us his views which he has drawn up in a memo.

Mrs. LAWRENCE then read the following note (from Mr. H. S. Lawrence, C.S.I.).

The Sukkur Barrage project is about to make an economic revolution in the life of the Province of Sind.

We know in England all about economic revolutions and the heat they generate, with the McKenna duties and the other problems of Free Trade versus Protection. The advocates of the one say hard things about the advocates of the other: their manners and morals, their character, their mentality.

But I have never come across a more complete all-embracing denunciation of an opposing view than that put forward by Mr. Wright in this paper. Mr. Wright has surveyed the project from the economic, agricultural, financial, and climatic points of view, and finds it bad in each particular.

Although he was chief engineer in Sind, he leaves the engineering part to be pulled to pieces by other eminent engineers, but he knows that that also is bad.

And he stands forth finally as the advocate of *inundation* irrigation as against *perennial* irrigation.

Now there is a great struggle of conflicting interests between the inhabitants of the North and the South for the use of this water.

The Punjab claims a prior right, as the water reaches them first; Sind claims that the water necessary to its life must not be cut off.

The exponents of the Punjab view have asserted that an inundational system was good enough for Sind, but they have never ventured to contend that, on its merits, this system was the best. That new standpoint has been reserved for Mr. Wright. Let me try to put the difference in the fewest words.

The most difficult problem in an agricultural community is seasonal unemployment. With an inundational system the farmer and his men and his cattle are condemned to long periods—months—of idle unemployment. With a perennial system the flowing water is ready for his fields in rotation throughout the year; and a constant succession of crops keeps him busy and prosperous all the time.

With the nightmare of unemployment before us in England, I think we can realize what the abolition of unemployment would mean for Sind.

I must not weary the audience with a detailed reply to all Mr. Wright's criticisms. I must be content with urging that his information, or his judgment, is at fault on every important point and giving a few illustrations.

Mr. Wright believes that Sind will be "ruined and soured" by siltless water. He is evidently unaware of the demonstrations on Government agricultural farms that siltless water can produce magnificent crops. His view is obsolete by twenty years.

Mr. Wright believes that the Sindhi has not grown winter crops, and, therefore, will not do so. He has evidently failed to observe that, in the rare localities where water has been available in the winter, the Sindhi invariably grows excellent winter crops.

His paper may be summed up in the charge that Government have been incompetent and neglectful in the most elementary features of the problem. Is this charge even plausible in regard to a project which has been sixty years under consideration?

And he gives one specific example that "the man-power problem" has been "most unaccountably ignored."

It is clear that Mr. Wright has not seen the official papers in which this point has been thoroughly explored, and he has failed to notice the proceedings in the Bombay Legislative Council; and this is a grave accusation to make without a careful study of material at the disposal of every enquirer! There is, indeed, no reason to doubt that the man-power available is amply sufficient.

Having had some personal responsibility for the preparation of this project during the last twelve years, let me say how gladly I have welcomed the powerful fight which Dr. Summers and his friends have made for their

counter-project. They have compelled the officers of Government to examine over and over again every point of the scheme that could be shown to be doubtful or weak. The Bombay Government is no more immune from hostile criticism in their Legislative Council than the home Government in the House of Commons; and I remember many questions being asked, based on Dr. Summers's pamphlet.

Nevertheless, in that fateful debate last June, the Legislative Council, after hearing the Government reply to every criticism, gave their assent to the project without a dissentient vote.

MR. OTTO ROTHFELD said he did not claim to speak on behalf of the Bombay Government, but he claimed to represent the views of that Government, having been for a considerable period the Collector for the district of Sukkur, and afterwards connected with Sind as Registrar of Co-operative Societies, during which period the movement grew so vastly that it was no exaggeration to say it had entirely changed the economic aspects of the province which would be affected by the barrage. He had also had the honour of being a member of the Legislative Council which considered the project, and which provided the money, and incidentally took a certain part in the discussion on the barrage project.

The main point made by the reader of the paper seemed to be the idea that there had been undue haste in dealing with the problem. Well, anyone with any knowledge of Indian affairs would know what to think of that suggestion. The project had been considered some sixty years ago, being actively taken up about twenty years ago; the project was submitted twelve years ago, and was returned by Lord Crewe's despatch in 1914, and the reply which was submitted by the Indian Government was submitted in 1920—seven years afterwards. Since then the project had been under consideration, and was finally settled in 1923—at any rate, giving ample time for deliberation. There seemed to him to have been a certain amount of forgetfulness as to the alterations caused by the reform scheme; under that scheme it was the Provincial Council which was responsible for a great project of this sort. It had to be examined by the representatives of the Crown first of all, but the final responsibility for its approval rested with the people who were affected by it, and the scheme had now been passed by those who were elected to look after the finances of the country, and whose duty it was to see that the project was beneficial to the Province. He had no hesitation whatever in saying that the Council had very thoroughly examined the project—there was no point which was not considered—and the project was finally carried with only one dissentient voice and with no division.

Mr. Wright had apparently given play rather to a vague fancy as to what might possibly happen than base his argument on real facts; but what surprised him most was his apparent ignorance of the fact that cultivation for subsistence only in India was now as dead as a door-nail; that change had affected every aspect of the people's lives, and the suggestion that the population of Sind existed on jowari alone was no longer the case. Wheat was very largely grown, and it was a fact that they could not get enough seed from Persia to satisfy the demand for improved wheat.

With regard to the question of land sales, there was a good deal to be said; he had seen a good deal of that matter, and he had no doubt whatever that the figures had been pitched too low. The figures had apparently been based on the understanding that the old practice of granting land at concession rates to existing cultivators would continue. The sales could be very greatly increased by selling the land to the highest bidder, and he was prepared to guarantee that if the co-operative societies were allowed to compete for the land available under the barrage scheme they alone would take up at least one-quarter of the land.

With regard to cotton, the question of the extension of the growth of long-staple cotton in Sind was a question of Imperial importance—(hear, hear)—and for that purpose they required the canals which would be provided by the scheme which was now being criticized. The question of the population of Sind no doubt presented a real problem, because it was a diminishing population, the reason being no doubt that under present conditions there was not enough water to support a bigger population. It was quite clear, however, that a scheme that brought so much land under irrigation would soon lead to an influx of people from the crowded provinces which adjoined it. (Hear, hear.)

In regard to what he said about the rabi crops, it was quite clear that as a matter of fact Mr. Wright was wrong, because experience showed that wherever water was available rabi crops were grown, and it was sheer pessimism which prompted any opposite view.

As to the question of avulsion, the suggestion that the Indus would be diverted by the barrage at the proposed site to another channel seemed to him to be an unreasonable suggestion. He was prepared to pin himself to the opinion of that eminent engineer Sir Thomas Ward, who had said that avulsion due to the barrage could not occur.

It was no use abusing the Province of Sind for not having developed in the past. Given the chance now of turning the desert spaces into green fields, there was no reason whatever for thinking that the Province of Sind would be one whit behind the other provinces of India.

Mr. BAKER said that he had taken a considerable part in the preparation of the project, and was responsible for all the revenue and financial estimates, and to a certain extent for the engineering details. A good deal had already been said about the question of avulsion: he would merely like to ask Mr. Wright why he did not warn them of that danger years ago when he was officially in charge of the River Indus? In those days the barrage was to have been made above the gorge, whereas now it was to be three miles below it. It should be remembered that the water was not going to stagnate, but flow in canals instead of the river-bed. With regard to the question of the canals being too small—or, in other words, that the duties had been fixed too high—well, the duties had not been fixed entirely theoretically; they were based on the performances of existing canals. As to the existing canals taking off more water than the barrage canals, that was quite true; they did take off more, but only for a few days of the year; and many of them took it because they could not keep it out.

With regard to the sales of land, it was not necessary to say very much after they had heard Mr. Rothfeld. They were not taking the land away from the zemindars; they were only going to auction about one-third of the whole of the cultivable waste land, and they would leave the zemindars considerably more than they would know what to do with. The Punjabis were as keen as could be to buy land. He did not agree that the merchants and lawyers were unlikely to become agriculturists; in his opinion they would make quite respectable landowners.

The Lecturer had said that the engineering details were too technical to be discussed here, but went on to say that eminent engineers complained that the designs were faulty. The answer was easy; other eminent engineers said they were not faulty.

It was said that the estimates should have been raised. But they have been raised, and were so high that it would have been possible to take a crore of rupees off to fit in with the fall in the prices of iron and steel. After Mr. Rothfeld's remarks regarding the population, it was hardly necessary for him to say anything further. He had come to the conclusion, however, that if they were left to rely on inundation canals, it would be a hopeless proposition for the future.

Sir CHARLES MILES said that he could not accept Mr. Wright's remarks regarding the old inundation canals. During his own experience, extending over thirty-five years, during which he had held charge of every district in the Province as then constituted, they had been very unsatisfactory; a perpetual source of trouble to the officials and loss to the cultivators. With regard to the canal Mr. Wright spoke of as giving a return of 100 per cent. on the capital outlay, he omitted to say there had been no expenditure on excavation in that case. It was an old pre-conquest canal. Inundation canals excavated since the conquest are not returning anything like that amount. In his opinion nearly every revenue official in Sind was extremely glad that the long-pending project had at last crystallized, and that the work is now being carried out, and they earnestly hope that it will be to the great benefit and advantage of the Province of Sind. (Hear, hear.)

One point emphasized by Mr. Wright requires consideration—viz., that the barrage canals as now designed and sanctioned will not carry a supply *even sufficient for existing cultivation*. The success or failure of the scheme, of course, largely depends on its ability to provide also for vast areas of *new cultivation*. Mr. Wright's statement is explicit. His view is supported by eminent engineers. If he is correct, the scheme will fail. If he is not correct, his statement should be refuted by competent professional authority and publicly.

Whether the scheme will cost twelve millions sterling (as estimated) or twenty, it is a very big thing, and there should be no shadow of doubt as to the canals being competent for their task.

Mr. B. DAS said there was a well-known book, "The Future of Sind," and he would like to know if the Lecturer had gone carefully through that book and had carefully sifted the facts therein contained? He personally had had great experience in Gwalior, and he found that the people were

quite willing to take up land allotted by the State, so he did not think there would be much difficulty in finding cultivators coming up to Sind in order to cultivate the land there.

Mr. F. W. Woods, who was present at the lecture, but was prevented by time from speaking at length, supplies the following note: "Mr. Lawrence complained that the Lecturer had avoided discussion of the engineering merits of the Sukkur Barrage Project; and Mr. Baker had echoed the complaint. It would have been useless, however, for Mr. Wright to discuss technical points when there was no pro-barrage engineer present to reply on those points. Three civilians, Messrs. Lawrence, Baker, and Rothfeld, had taken part in this discussion successively on the pro-barrage side. It was all to the good that they should have felt impelled to do so, because, as the Chairman had remarked, the difficulty in the past had been to obtain the views of the supporters of the sanctioned scheme. It was unfortunate that they had not been able to bring any of their eminent engineer-advisers to the lecture hall.

"Mr. Lawrence condemned inundation canals as being economically inefficient. He extolled the merits of *siltless* water for irrigation; and apparently underrated water-borne silt as a fertilizing agent. The inundation canals of Sind yielded annually a *net* revenue of 50 lakhs of rupees and those of the Punjab 20 lakhs. Those inundation canals for which capital accounts were maintained yielded a net revenue return of 10 per cent. on capital outlay in Sind, and 13 per cent. in the Punjab; but these considerations were ignored by the Bombay pro-barragists. Mr. Lawrence was not justified in stating that the Sukkur Barrage Project of 1920 had been under consideration for sixty years past. The essential features of that project had never been considered by anybody prior to the year 1918, and by only one engineer with experience of perennial irrigation since then.

"Mr. Baker had declared that there could be no risk of river avulsion resulting from the action of the barrage, because the latter was to be located downstream of the gorge. It was absurd to contend that an obstruction opposed to a current, *downstream* of a "drowned" fall, could create no afflux *upstream* of it.

"Mr. Rothfeld laid claim that the growth of long-staple cotton was a question of Imperial importance. That was true, but Mr. Rothfeld was wrong in suggesting that *a barrage was necessary* for the purpose of that cultivation. The whole of the Rohri Canal tract and of the East Nara tract could be irrigated efficiently and *perennially* by canals designed to work without the help of a barrage. The barrage project of 1920 forecasts an irrigation, annually, of 5,300,000 acres of land. Assuming for the moment that that figure was based on reliable calculations, 90 per cent. of that area could be irrigated annually *without the help of a barrage*. The omission of the barrage from the project would effect a saving of at least six crores of rupees; and, in the interests of the Indian taxpayer, this was a matter that ought not to be ignored.

"The Sukkur Barrage Irrigation Project of 1920 would be an excellent project if the barrage were omitted from it, and if the designs and

estimates of costs of the canals were drastically revised in accordance with the principles of modern perennial irrigation science.

"Mr. Rothfeld thought the sales of land could be very greatly increased by selling land by auction to the highest bidder, but his opinion could carry weight only if he could support it by references to the results of experience already obtained from similar land sales, on a large scale, in India or elsewhere. In the Lower Chenab Doab of the Punjab, about two million acres of Crown waste land were sold at the average rate of 80,000 acres annually; but the price paid was only Rs. 12½ per acre. In the Lower Bari Doab similar Crown land had been sold by auction at an average price of Rs. 275 per acre, but the *extent* of the sales was only 82,000 acres, at the rate of only about 10,000 acres per annum. The extent of the culturable Crown waste land available for sale under the Sukkur Barrage Project was about 1,500,000 acres; whilst in the Punjab there would be 2,500,000 acres of land offered for sale under the Sutlej Valley Canals' Project, and 1,500,000 acres under the Thal Canal Project. Over 5,000,000 acres of waste land would thus be thrown on the market; and the prices of land sales would be bound to vary inversely with some function of the extent of area sold annually. If the land is to be sold quickly, it must be sold *cheap*; but if good prices are sought the sales will be slow, and the development of irrigation and revenue will be correspondingly slow, whilst charges for interest on capital outlay are mounting up rapidly. If Messrs. Lawrence, Baker, and Rothfeld are to be accepted as expert authorities on this subject now, how is it that they did not forecast this land-sale revenue in the barrage project of 1920? How was it that they had not thought of this source of revenue till two years after the project had been sent up to the Secretary of State?

"Sir Charles Mules was wrong in condemning inundation canals, and the Ghar Canal in particular. He must be aware that the tract irrigated by this canal is the most prosperous part of Sind, and that it is known accordingly as the 'Garden of Sind.' The mere fact that it had cost the Government little to construct or to utilize this canal ought to be regarded as a point in its favour rather than as a blemish. The most remunerative of the Punjab perennial canals owed their financial prosperity to their relatively low capital cost. It was the enormous expense of the proposed Sukkur Barrage that jeopardized its prospects of financial success.

"The Chairman had recently been informed, from Bombay, that a canal system *without* a barrage 'would be ineffective, because if it were afterwards found necessary to build the barrage, all that had been done in the way of canalization would have been wasted, and would make it more difficult to execute.' The Chairman's informant seemed to have abstained from explaining the data on which he based this opinion. The Rohri Canal, as designed in Dr. Summers's Project of 1910, might preferably have been designed at levels a few feet lower, throughout the first thirty miles of its course; but, even according to Dr. Summers's design, that canal could have worked efficiently *as a canal of perennial flow*, whether a barrage was built subsequently or not. The pro-barragists must feel that

their case is weak, otherwise they would have asked for the appointment of a committee to examine it professionally long ago."

Dr. SUMMERS said that rice on inundation canals in Sind is given about 24 inches depth of water per month at the field and high classes of rice even more.

In his 1920 project, however, Sir T. Ward, owing to misunderstandings and want of Sind experience, had only allowed about 9 to 12 inches, which is quite insufficient.

Not only is the supply to be cut down, but the project is based on cultivators paying 60 to 100 per cent. more for this greatly reduced supply. As Mr. Baker said in 1907, while in revenue charge of the Larkana District, "to reduce the present water supply would not only be illegal and inequitable—it would also be unprofitable."

Rice is the principal kharif crop in Sind, and the project is based on obtaining a net revenue of about 70 lakhs (£500,000) from 820,000 acres of rice. This revenue, however, could not be realized unless the new canals are made very much larger.

Dr. Summers had no hesitation in asserting that the canals as designed in Mr. Gebbie's 1923 project, which has been sanctioned by the Secretary of State (Lord Peel), are far too small. Observations made by engineer and agricultural experts during the past twenty years show that rice requires twice or more than twice the quantity of water allowed by Mr. Gebbie's canals.

It is evident, therefore, that if this scheme is carried out, many Sind zamindars will be ruined, the Indian taxpayer will have to make good an annual deficit which may be 100 lakhs (£700,000) or more, and the prestige of the Indian Public Works Department and the British Government will receive a severe blow.

With reference to the sale of waste land by auction in order to finance Mr. Gebbie's project, Dr. Summers said that Messrs. Baker and Lane, the officers specially appointed by Government, who prepared the revenue forecasts in 1919, allowed for an annual revenue of 3 lakhs from the sale of patches of waste land for 54 lakhs (£400,000), but said it might be better to forego this revenue and "give the zamindars a fair start."

The Secretary of State's Barrage Committee of 1913 also stated in their Report that the conditions of this land are "entirely different from those of the valuable Crown waste lands in the Punjab, and no great accession of revenue can be expected from the sale of waste land."

Now Mr. Gebbie's 1923 project is based on an annual revenue of 75 lakhs from the sale of waste land for 1,260 lakhs (£9,000,000), and this astounding amount is arrived at by assuming that this land, much of which is of inferior quality, will realize rates from Rs. 50 up to Rs. 150 per acre for perennial land, and Rs. 250 for good rice land. Mr. Rothfeld, who says he does not owe "any very great allegiance to the ideals of the past" as to land being kept in the possession of Sindhi zamindars, states that given a free hand he could get higher prices for it.

It will be in the best interests of Sind and of the taxpayer if Government

takes the advice of experienced Sind revenue officers rather than of Mr. Rothfeld. For example, Mr. W. H. Lucas, while Commissioner in Sind, after consultation with Messrs. H. S. Lawrence, C. M. Baker, F. G. Pratt, and other experienced assistants, estimated Rs. 10 per acre as the sale price of waste land, and, with reference to suggestions for higher rates, said : " It will be impossible, owing to the certainty of continual disputes, if this were done, to introduce outsiders, and these areas must be taken up by the people already on the land." Sir Charles Mules, who has had over forty years' experience of Sind, considers high malkano " pernicious both in the interests of the land holder and of Government." Mr. H. S. Lawrence, while in Sind, proposed an extra rate of one rupee per acre for twenty years, and said : " It is undesirable to withdraw capital from the settler on the land, on whom we rely for the rapid development of the land." Another experienced revenue officer says : " It is surely an axiom of Sind administration that the land must be kept in the hands of the cultivating classes, and any policy of disposing of it unreservedly to the highest bidder in the open market would be simply suicidal."

In conclusion, Dr. Summers said that if the project is carried out according to the advice of the 1913 Barrage Committee, three members of which are living in and near London, not one rupee of the 12 crores for land sales, nor of the 2 crores from the Famine Fund, will be required, as the Rohri Canal, as a perennial canal, by itself to begin with, will give a surplus revenue of 15 lakhs (£100,000) or more per annum, and will open up and irrigate 2½ million acres of the finest cotton land in the world in three or four years.

Mr. Gebbie's project, on the other hand, if all goes well, is designed to open up this great cotton tract in twelve years, or eight years later, and will result in an annual deficit which cannot be less than 50 lakhs (£350,000), and will probably be over 100 lakhs.

As actual work on the barrage will not be commenced before October, 1925, there is plenty of time to examine the project, correct it, and save Sind from financial ruin, and Government from a certain loss of fully 10 crores (£7,000,000).

One of the most important points in favour of the 1913 Barrage Committee's project for making the Rohri Canal first, as opposed to Sir T. Ward's project, which gives precedence in construction to the barrage, is that this great canal will be a perennial canal by itself, and will fit in with the barrage and Right Bank Canals whenever the complete project is carried out.

Mr. T. SETON said that, speaking purely from a financial point of view, the whole project seemed to him to need considerable discussion, so as to get at the actual facts of the matter. At any rate, that seemed to him, as an outsider, to be the impression given. In fact, they ought to remember that all doctors differed.

The CHAIRMAN said that there had, at different times, been very considerable discussion on the project, but, in his view, he thought the Government would have been wise if they had appointed a very strong Commission

composed of independent experts, who might have given the Government the benefit of their advice on such a great and gigantic project. I think most people are convinced that the idea was for the benefit of the Empire, but the whole point was : Was it a sound project ?

Meanwhile, he thought they ought to be extremely grateful to the Lecturer for having given them such an excellent paper, and one which had led to such an exhaustive discussion, and also for having provided such excellent maps and diagrams of the scheme. (Hear, hear.)

The LECTURER, in reply to the criticisms on his paper, said that a low river, banked up by barrage gates, must induce silt deposits in the pond. Moreover, these gates, interfering with the natural water-level in the *inundation* season, and raising the surface to give the kharif full supply, will also induce silting somewhere above the weir, possibly in the deep pit of the gorge under the Lansdowne Bridge. To satisfy the full supply-level of the projected canals, the records of the Bukkur gauge readings for seventy-five years show that it will be necessary to "regulate" the river by lowering the gates to some extent into the stream for periods that *average* sixty days in every 100 of the kharif season (June-September). Under these conditions, with natural velocities reduced in years of low flood, the shoaling above the weir may be so formidable that if a great autumn flood occurs it may thrust such huge accumulations of mud and sand into the mouth of the gorge as to choke it temporarily, and set up an extraordinary afflux that may cause the flood to breach the river banks above the gorge and form a new channel for the river. Under better circumstances the mud and sand set moving can hardly be kept out of the barrage canals, and consequently these may easily be rendered inoperative for many weeks—even months—at a critical irrigating period.

Continuing, he said that while he was chief engineer in Sind he had expressed no disapproval to the work of designing a barrage for the Indus which was then (1917-19) in hand. The thorough investigation of all possible sites for a work of such magnitude had been suggested by the London Committee in 1913, and it was his impression that a similarly strong professional committee would examine the particular design begun in 1918 and incorporated in the 1920 project. It was because no outside opinion (so far as he knew) to Sir Thomas Ward's barrage proposals had been taken, and that he disagreed with the optimists who had drawn their glowing prospectus entirely on the analogy of the great successful irrigation enterprises of the Punjab—a province like Sind in some respects, but unlike it in many important features which had been ignored—that he remained unshaken in the stand he had taken, and that also in spite of Mr. Rothfeld's welcome exposition (hear, hear), of the views of civil officers, and the considerations that had led the Government of Bombay to embark upon what will be known, hereafter, as the Lloyd Barrage Project. While in Sind he had approved of recommendations made with respect to canal discharge "duties" and the "intensities" suitable for the future, but the canals to be made according to the sanctioned project had been designed to work at other duties and other intensities, which he found inadequate.

It is on this account, principally, that he held that the projected canals will be too small. Mr. Lawrence stated that siltless water in Sind had been found to grow good crops at an experimental farm; but the condition in which the soil was before the crops were sown and watered was not mentioned. The soil may have had natural fertilizers present in profusion. The Lecturer said he was aware that siltless water—e.g., water from wells—is used very occasionally in Sind for irrigation, but it was his experience that those who used such water also top-dressed their lands with silt conveyed from the spoil banks of neighbouring watercourses, and in the Punjab manure was then often used, expensive operations that pay only when valuable garden crops were those under well irrigation. As regards a lake that may be thirty miles in length in the winter months, the Lecturer explained that during that season the river always ran low and remained low for many weeks consecutively. It then fell to a level which at the barrage site was seldom above 185 M.S.L. To obtain the proper level for winter supplies in the canals as designed, the barrage gates must impound water until it stands at 194.50 M.S.L.—that is to say, the water is forced to rise at least $9\frac{1}{2}$ feet above its natural winter level. The surface fall of the river in that season is probably only 4 inches a mile, so that the lake created by the closed gates may be $9\frac{1}{2} \times 0.33$ feet = 29 miles. Thus, at a point twenty-nine miles from the barrage, the muddy stream enters the immense body of stagnant and, consequently, almost silt-free water that fills the river-bed.

Mr. STANLEY RICE asked if that was not the case also in the Nile?

The LECTURER replied that the Nile is dammed at the first cataract at Assuan by a barrage that is a storage work, pure and simple; a reservoir immensely greater than that to be made at Sukkur is the result. This reservoir delivers siltless water to the Nile bed below it, and in that the water flows for 350 miles, picking up some silt on its way, until the important Ibrahimiya Canal is reached above another barrage at Assiut. It is the complaint of Egyptian irrigators depending on the Assuan-Assiut arrangement that the water is less silt-charged and less fertilizing, the crops on that account being less prolific, and that their lands are deteriorating. On the other hand, the "basin" system of irrigation in Egypt, a purely inundation one, enriches the soil annually.

The Lecturer went on to say that silt-laden water for perennial irrigation can be obtained easily for the cotton-growing plains north of Hyderabad, if Government dig the Rohri Canal somewhat on the lines proposed in the 1910 project. No barrage whatever is necessary to attain that result. Judiciously placed regulators in the canals will make every description of watering possible at all times of the year. A strip of high land, about fifty miles in length (all in Khairpur State, where the barrage project does not legislate for rabi waterings), in the upper reach of such a Rohri Canal, will not get flow water, but all the rest of the land in the 155 miles of the canal's length can be served with flow to any extent found necessary, and cotton and wheat for foreign markets can be grown to the limit the available manpower alone will define for an indeterminate future time. When comparing such things, it should not be forgotten that the population of agricultural

Egypt is more than ten times that of Sind, culturable areas being taken as equal. The whole of the left bank of the Indus and the rice area on the right bank can be given plenty of water from new or remodelled canals without a barrage, and the area to be under the north-western perennial canal can be commanded easily and naturally from a new perennial canal that might leave the river above Kashmor, where a rocky river margin exists and favours such an enterprise. If it is really wanted, perennial water can be had in abundance in Sind by placing the beds of inundation canals sufficiently low to tap the winter river. So suitable is the ground surface slope in the instance of the Rohri Canal that at least one or more falls of sufficient height can be introduced into it which would provide electric power at Sukkur and elsewhere for use in cotton-ginning factories and the like.

The CHAIRMAN said they had heard many criticisms at various times, and they had now had the pleasure of hearing rebutting evidence, and he hoped everyone would be content. They had heard the views of those who were responsible for the scheme, and they had also heard their critics. For himself, he could only say that he hoped that the project, for the starting of which his friend, Sir George Lloyd, had shown such energy and determination, would bear the good fruit that was expected, and that the Province of Sind, for which he had a great affection, would prosper accordingly.

A hearty vote of thanks to the Chairman and to the Lecturer terminated the proceedings.

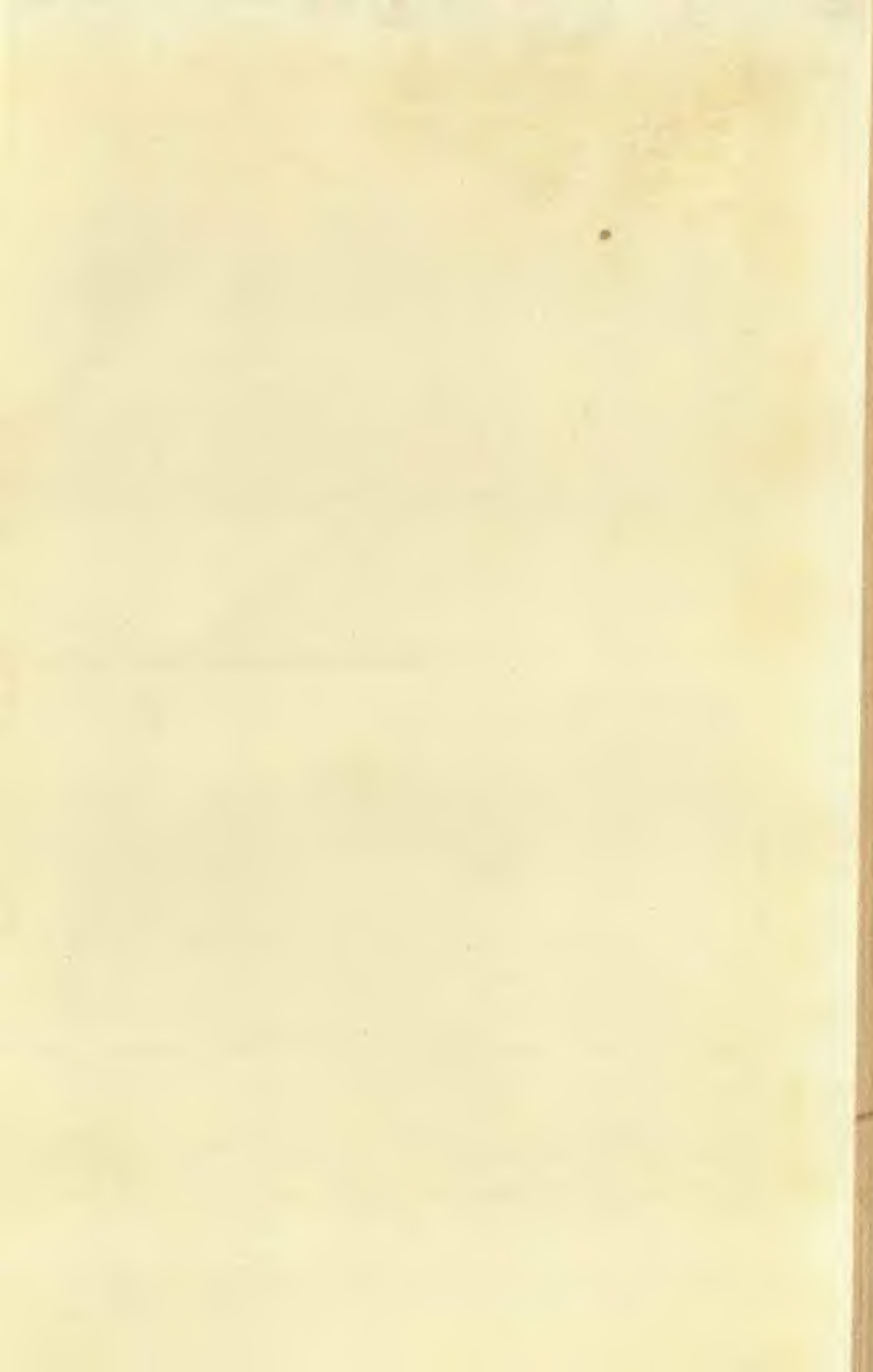
Sir JAMES WILSON writes :

" I have not had the time or the opportunity to make a thorough study of this project, but I have read a good deal on the subject, including Mr. Wright's paper, and possibly my experience of great irrigation schemes in the Punjab may entitle me to offer a few remarks.

" I am strongly impressed by the objections brought forward to the project, not only by Mr. Wright and Dr. Summers, but by other engineers of great Indian experience, such as Sir John Benton and Sir Lionel Jacob, and fear that, if the barrage is completed, the whole scheme will cost a much larger sum than is anticipated, the income will be much less than is estimated, and the province of Bombay will find itself saddled with a huge burden of debt. Moreover, there is a great danger that the construction of the barrage will induce this mighty river to seek a different channel, in spite of all the efforts that puny man can make to keep it to its present course through the gorge at Sukkur; and that the barrage itself will be left high and dry, and the whole of the irrigation dependent upon it will fail, with disastrous consequences to the large population which it is proposed to establish on the irrigated area. I therefore support Mr. Wright's suggestion that further enquiry should be made into the advisability of proceeding with this project. The Secretary of State should be pressed to appoint a new committee of irrigation experts, who should examine the objections which have been so strongly urged to this project, and should advise as to whether it should not, even now, be dropped, until the development of irrigation from inundation canals has led to an increase in the population

and the prosperity of Sind, and further experience has been gained as to the probable future course of the Indus."

NOTE BY THE SECRETARY.—Special opportunities have been afforded to the expert critics of the sanctioned scheme to express themselves at greater length than was possible at the meeting. The subject had been treated on a previous occasion, but the discussion proved to be so one-sided that it was thought advisable to bring it up once again in the hope that in this way some finality might be reached in this important controversy.





PAGODA AND COURT OF HONOUR AT THE TOMB OF THE EMPEROR, THIEU TRI.



QUANG-YÊN HONGAY.

INDO-CHINA AS A TOURIST RESORT

By A. GARNIER

(Résident-Supérieur, Directeur de l'Agence Economique de l'Indochine)

THE intellectual currents between Europe and the Far East, as also their commercial ties, are becoming more and more marked. This is a phenomenon from which both Europe and Asia should draw as much profit as possible. It is therefore eminently desirable that people should no longer be content with reading about distant countries in books, but go themselves to the places and study the races, the artistic treasures, the natural beauties and the customs, on the spot. Everything should point to a general movement among travellers and tourists on a kind of voyage of discovery to the Orient. Indo-China is at the cross-roads of the great maritime routes and should therefore be the first to profit from such a movement. Her advantageous situation should, accordingly, favour the rapid extension of tourist traffic in a country which is so attractive to foreigners on account of its historic sites and artistic heritage, handed down from generation to generation through the centuries.

The tourist who lands at Saïgon visits a charming city which, without fear of contradiction, can be described as the jewel of the Far East. This reputation is justified by the splendour of its public buildings, the beautiful symmetry of its main thoroughfares, and the distant views from its main centres. This city lies on the river which bears the same name. Its chief attractions are the Botanical Garden, the wonderfully fashioned Pagodas, that of Canton, of the Chettys and of Dakao, on the road to Cholon. Cholon, some four miles away, is an entirely Chinese town and is attractive on account of its ruins and pagodas which lend it a very picturesque appearance. The tourist can then

proceed by excellent and beautiful roads across Cochin China. There he will learn to appreciate the beauty of the sunsets over the wide deltas formed by the immense and life-giving streams. He will then cross fertile plains covered with rich crops and reach Phnom-Penh. The capital of Cambodia is easily distinguishable by the spires of its pagodas. It lies on the four branches of the Mékong. The most famous of the pagodas is surnamed Silver, and also worthy of note is the royal palace, still full of reminiscences of the reign of King Sisowath. One hundred and eighty miles separate Phnom-Penh from Angkor. The road lies across the finest parts of the Cambodian land, indescribably beautiful in its light and colour, harmonizing so effectively with its historic sites. It may be mentioned in passing that the ruins of Angkor are also in direct communication with Saïgon during seven months of the year, thanks to the steamers of the *Compagnie de Navigation* which connect Saïgon with the great lakes of Cambodia.

Now we have reached Angkor, famous in name, known already all over the world through the beautiful descriptions of Pierre Loti. Of all the countries in the Far East Cambodia is certainly the richest in ancient monuments. Here is a wealth of ruins, the splendour of which surpasses anything that India or Java can offer to the sightseer: moreover, they are scattered over territory rendered beautiful by one of the most picturesque rivers in the world.

The Temple of Angkor-Vat is remarkable for its three domes and monumental stairways which join the terraces with the sanctuary. The first impression is that of a monument of Assyrian art. A mile away Angkor-Tom, the royal city, embraces in a circle of eight miles a vast number of interesting monuments interspersed with tropical vegetation. These monuments flank avenues and adorn public squares of tremendous dimensions. Chief among them may be mentioned the Elephant Esplanade and the Esplanade of the Leprous King. There was a time when

the tumult of processions and the clash of arms filled the air ; now silence is supreme, unbroken but for the occasional prayer of a monk or the lowing of cattle from a neighbouring village. The history of Cambodia and the mythology of its gods is described in the bas-reliefs which adorn the palaces and temples along the endless avenues.

After Cochín-China and Cambodia the tourist will proceed to Dalat, where on the plateau of Lang-Biang he will experience for three days, amid beautiful surroundings, the temperate climate of Europe. Situated at a high altitude, Dalat is the rendezvous of the European population of Indo-China which gathers there in search of repose and health.

Big-game hunters will find good sport in this country—tigers, panthers, buffaloes, and stags. At Nha-Trang, the sanctuary of Po-Nagar, "*La Dame de la Cité*," is worthy of the tourist's attention. The route from Nha-Trang to Quinhon offers unexpected attractions—gigantic rocks, passages over lofty summits, and marvellous panoramas. The traveller suddenly imagines himself transported to some beautiful corner of France, only to find himself again almost immediately amid scenes reminiscent of Ceylon and India. In the environs of Quinhon are to be found numerous monuments illustrative of Cham civilization : the Chaban Citadel, the Hong-Thanh Tower, the tower of silver, of ivory, copper, and gold.

Next comes Tourane and the excursion by river to the fine marble mountains, calcareous rocks in infinitely varied shapes, of which one contains grottos converted into Buddhist sanctuaries. From Tourane Hué is reached by a very picturesque route, crossing the Pass of the Clouds, famous for its beauty, and then traversing an immense forest of great density. Hué is an Imperial city, the capital of Annam. Of all the cities so far mentioned, this is the most characteristic of the civilization of the country. Built at the side of the River of Perfumes, this city offers a surprising number of beautiful sites and historic monuments.

Amid such a wealth of attraction the following sights call for particular attention: the Royal City with its battlements, built after the manner of Vauban, and comprising the inner Royal City, the capital, which is at the same time the seat of government; the Red City, which is forbidden ground, being reserved for the Royal Family, where no tourist may enter; the Royal Screen, the object of which is to protect the city against evil spirits; and lastly, the Imperial Burial Ground, the glory of which is comparable with, if it does not exceed, the beautiful mausoleums which are the pride of China.

At Vinh, after the visit to the citadel, an excursion should be made to Napé, which forms the means of communication with Laos. It is interesting to note the great change in scenery and local customs as soon as the coast is left behind.

At last Hanoi, on the right bank of the Red River, is reached. Here are three distinct towns: the French town, built around the old "concession," with its imposing public buildings and wide avenues; the native town, with its dense quarters, innumerable winding streets and booths; finally, the citadel, containing the dwelling of the grand Buddha and the temple.

Haiphong is an entirely new town, attractive in appearance and clean. It is also a maritime centre devoted to commerce and industry, the harbour of which is at the mouth of the Yunnan. The journey comes to an end with the excursion to the Bay of Along, which embraces an immense archipelago studded with thousands of islands, large and small, formed by the ceaseless action of the waves, 200 square miles in area. This bay is known to the Annamites as the Blue Sea, and is the most pre-eminent sight of natural beauty in Indo-China. A steamer carries the sightseer among the winding straits and past the dolomite rocks, which seem like mediæval dungeons, the whole presenting an extraordinary chaos of isles all differing in outline. Worthy of note is the "*Ile des Merveilles*," with its

immense grotto, as also the "Marionettes," the "Ile de la Surprise," "Le Cirque," with its sheer cliffs. The eye dwells longingly amid these scenes replete with mystery and melancholy, and the traveller leaves the spot with the feeling of having seen sights that will never fade from his memory. In short, the visitor to Indo-China will meet with beautiful landscapes, marvellous art treasures, the habits and customs of a people whose civilization has abided through centuries, through all the checks and vicissitudes of a history of which that country can well be proud. The life of the people can also be studied with profit. This can be done most effectively by attending the traditional festivals and joining the processions and ceremonies which are the joy of the people. He will find a ready welcome from them, and will be invited to mingle with their life and thus learn to appreciate their attractions.

Two French steamship lines serve Indo-China. The fast boats leave Marseilles for Yokohama and touch at Port Said, Colombo, Singapore, Saigon, Hong-Kong, and Shanghai. On this long voyage they collect tourists from all parts. But there is no reason why the French lines should have a monopoly of the tourist traffic to Indo-China. British, American, Canadian, Japanese, and Dutch steamers carry every year many thousands of passengers backwards and forwards between Europe and the Far East. They do not, however, as yet touch the Indo-Chinese coast. It is possible that in the near future some such service will be organized as would attract tourists from Singapore and Hong-Kong.

A service between Singapore and Saigon is already working; it would, however, be opportune to make this bi-monthly service between the two ports run every week. Another need is a direct line of steamers between Haiphong and Hong-Kong. The prosperity of Indo-China and the development of its foreign trade will in time solve the problem of communications and the transport of tourists.

Indo-China possesses 1,250 miles of railways and an admirable network of roads. Motor services are working on all the main routes, and steamer communication on the rivers. Though much has been done in every domain, more remains to be achieved. Those who work to achieve that prosperity deserve our confidence. The beauty of the Indo-Chinese monuments and their art treasures will do the rest. Every year the stream of tourists is sure to swell.

SOME REFLECTIONS ON AN INDIAN RENAISSANCE

BY THE EARL OF RONALDSHAY, G.C.S.I., G.C.I.E.

I PROPOSE in the following pages to discuss the question of a renaissance in Indian art, and my examination of the matter will fall under two main heads. That is to say, I shall put forward two questions for consideration—first, What evidence is there of any such renaissance? and secondly, Assuming that evidence of a renaissance exists, what significance is to be attached to the movement? I can only speak with first-hand knowledge of Bengal; but it is in Bengal that the chief evidence of an art renaissance is to be found. That evidence is at present provided mainly by the existence of a modern school of Indian painting in Calcutta, which is associated with the names of two members of a famous Bengali family, the brothers Abanindra Nath and Goganendra Nath Tagore. Let me recall briefly the history of the rise of this school.

With the break-up of the Moghul Empire, Indian art underwent an eclipse, for just as the Moghul dynasty was the last great line of Oriental rulers to hold sway in India, so were the Moghul and Rajput schools of painting the last flowering of Indian art before the establishment of British dominion. The transitional period was not calculated to foster the arts of peace. Far from it. The turmoil and chaos out of which the administrative genius of the British people gradually evolved order left the people of India physically, intellectually, and emotionally exhausted; and pending their recuperation, they passively accepted the new order of things conveyed to them from the West,

including in the particular sphere with which I am here concerned the schools of art set up with admirable intention by the Government. The prolonged period of peace and order which has been a gift of such priceless value from Great Britain to the Indian peoples was favourable to a recuperation of their exhausted energies, and with renewed vitality came an instinctive realization that, good as were the gifts which they had received from the West, they were not in all respects in harmony with their own peculiar genius. The rapidly growing strength of this conviction in recent years has been a factor of no little influence in bringing about the unfortunate antagonisms which for some time past have darkened and embittered the relations between the British and the Indian peoples. But I am now concerned with art and not with politics ; and it will be sufficient for my purpose if I trace the history of the Government school of art in Calcutta.

The aim laid down for the school has for the most part been frankly utilitarian. But while this has been so we find frequent indications of the existence in the school itself of a spirit which has rebelled against the imposition of these limitations. For example, the course laid down in 1887 was devised with a view to turning out skilled draughtsmen, designers, lithographers, wood engravers, and modellers. Three years later it was reported that the school was chiefly concerned with the fine arts, and that the course of training was more exacting than was required for industrial students. A little later the position of the Government schools of art in India generally came under review, and Lord Kimberly, who was then Secretary of State, expressed the view that they might be absorbed in existing technical institutions. This ultra-utilitarian proposal was submitted by the Government of India to an art conference which sat at Lahore in 1894, and which agreed

that the schools should be more fully utilized for the purpose of improving technical instruction. While the Government of Bengal were unwilling, in accordance with the above recommendation, to merge the school of art in the civil engineering college, they did not differ greatly from the intention of the Lahore Conference, for while they held that the civil engineering college should set the standard in technical and manual training in mechanical arts, they equally held that the function of the school of art was to set an equivalent standard in the arts of drawing, painting, modelling and design.

With the appointment of Mr. Havell as Principal, the spirit of creative art received an impetus. His genius rebelled against the fetters imposed by the utilitarianism which dominated the aim of the school, and he found kindred spirits in the brothers Abanindra and Goganendra Nath Tagore, who were teaching and studying in the school respectively. He threw himself heart and soul into a study of the fine arts of ancient India, and when obliged to retire on grounds of health in 1908, he urged the appointment of Mr. Abanindra Nath Tagore as his successor. His plea was that the Bengalis had shown a decided genius for painting, and that it would be better for the school to develop along these lines than to persist with the idea of teaching art as applied to the industries for which they had no inclination. In other words, Mr. Havell wanted to see the school of art become a live institution in an Indian renaissance rather than remain an arts department in a technological institute. The Government of India were not prepared to adopt this view, and utilitarianism again prevailed.

The decision was fruitful of results. The brothers Tagore suffered more and more from spiritual malaise. The work to which their hands were constrained warred

unceasingly against the promptings of their soul, and it is clear that deep down in the subconscious regions of their being the instinct of the old Indian masters was striving to find expression. This is all the more interesting in view of the fact, as they have informed me, that they were then ignorant of the tradition and formulæ embodied in the *Silpa Shāstras*, the Indian classic on fine art. Dr. Abanindra Nath Tagore continued to act as Vice-Principal of the school up to the middle of 1915 ; but before that time it was becoming clear that sooner or later a break must occur. More than a year before he had been described by an acute observer, Mr. W. Hornell, C.I.E., as aiming at the development of an indigenous school of imaginative painting, stimulated by his own example and by study of the legends of Sanskrit literature. Events soon proved that when the brothers took the final step of severing their connection with the school the times were ripe for their doing so. They gathered round them a group of artists many of whom—Nanda Lal Bose, Khsitindra Nath Mazumdar, O. C. Ganguli, Surendra Nath Kar, Asit Kumar Halder, and Mukul Chandra Dey, to mention but a few—have already made names for themselves as founders of the modern school of Indian painting.

By persons interested in Indian culture these developments were watched with profound sympathy, and in 1907 there was formed in Calcutta an association of Indian and European gentlemen under the title of the Indian Society of Oriental Art, the objects of which were the cultivation among its members and the promotion among the public of a knowledge of all branches of ancient and modern Oriental art. Under its auspices the paintings of the Tagore School were exhibited annually to the public. The work of the Society not unnaturally received a check as the grim spectre of war laid an ever-tightening grip upon the land. With

the conclusion of hostilities, however, it was felt that the time was ripe for further effort, and steps were taken with the object of giving it a more assured position and of widening somewhat the scope of its activities.

With the assistance of a Government grant the Society secured for the school suitable accommodation for a studio and lecture hall; eminent exponents of the new school were engaged as teachers, and scholarships for indigent pupils were provided. A series of lectures was planned, and the publication of an art journal under the title of *Rūpam* (Form) arranged for. This reorganization was explained at a gathering held at Government House on December 4, 1919, at which recent works of a number of the artists of the new school were on view, and an address, in part descriptive and in part critical of the new movement, was given by Mr. O. C. Ganguli, himself an accomplished artist and a discerning art critic. Since by that time the movement may be said to have reached a definite stage and to have firmly established itself, Mr. Ganguli's summing up of its aims and its achievements possesses a special interest, and I will try to summarize briefly his conclusions.

First and foremost he described the work of the school as consciously and intentionally idealistic. It was the avowed intention of its masters, he declared, to escape from "the photographic vision and to secure an introspective outlook on things which takes one away from the material objectives of life to a rarefied atmosphere of beauty and romance." And he went on to lay emphasis upon this characteristic of the movement. Its exponents, "instead of busying themselves with recording the superficial aspects of phenomena, have worked with a deeper motive and a profounder suggestion, seeking to wean the human mind from the obvious and the external reality of the sense, disdaining

to imitate nature for its own sake, and striving to find significative forms to suggest the formless infinity which is hidden behind the physical world of forms." They have sought, that is to say, to maintain what seems to me to be the distinctive and essential characteristic of the art of India, namely, its extreme idealism; and Mr. Ganguli thinks that they were right, therefore, when they adopted the traditional methods of Indian painting as the basis of their experiments. He admits that the adoption of this course was responsible for certain temporary disadvantages. The necessity, for example, for studying and absorbing all the qualities of the traditional craft led to a certain lack of originality in the early days of the movement; but the leaders realized that a period of gestation characterized by imitation rather than creation was inevitable before they could acquire the power of developing the old craft on new lines, if those new lines were to be in continuation of and in perfect consistency with its history and genius. Generally speaking Mr. Ganguli's conclusion seems to be that the school has not fully emerged from a transitional stage. "It is undoubtedly inspired by national memories, but is hardly yet pulsating with the throb of modern aspirations." He seems to think that the artists have held too much aloof from the more modern currents permeating Indian life. "They find no inspiration in modern Indian life," he says, "in its new attitudes and gestures, in its new environments and settings and its new occupations. The subjects which at first attracted them were almost entirely mythological scenes and legends from the national epics and popular folk lores."

In one respect he thinks that they have been unsuccessful in upholding with any degree of courage the traditions of the older Indian schools; and by their failure to resort to the bright and pure colour schemes which were

so pronounced a feature of the Moghul and Rajput schools "have undoubtedly missed one of the chief characteristics of Indian pictorial art." But despite such criticisms, he concedes that a good deal has been achieved. The movement has already succeeded in bringing about a little revolution in public taste, while "the most critical views are agreed in admitting that the productions of the school have been inspired by a genuine respect for Indian sentiments and moods, and have succeeded in presenting Indian subjects in the true atmosphere of Indian thought and setting." He thinks that it has not only been successful in reviving the spirit of old Indian art, but has in many cases added its own contributions to the old stock. "And apart from its present achievements, its promises are more valuable as its possibilities are many and diverse."

I have given Mr. Ganguli's estimate of the modern school of painting in Bengal because he is a competent art critic, while I am not. If I were asked for my own opinion as a layman in these matters, I should be inclined to say that, while almost all the pictures of this school which I have seen possess an attractive prettiness, they do not in all cases carry conviction. But there are outstanding artists among them whom I can never conceive as laying themselves open to this mild and diffident criticism. Khsitindra Nath Mazumdar, a number of whose pictures I possess, is such a one. His work undoubtedly seeks and finds its inspiration in his deeply religious convictions. He is, as I happen to know, a devout follower of the Vaishnava creed.

Perhaps enough has been written above to justify me in claiming that the answer to the first question which I put is that there is positive evidence of a renaissance in Indian art. In answering this first question I have incidentally gone a long way towards answering the second question—

namely, What is the significance attaching to the movement? I have shown, for example, that it was an awakening race-consciousness expressing itself in terms of art that caused the brothers Tagore to sever their connection with the Government school of art, and to turn to the cultural traditions and ideals of their own land.

On all sides of me in Bengal I have seen this unrest of spirit at work. I have traced it alike in movements which I have had unequivocally to condemn, and in movements which have seemed to me to be worthy of the highest encouragement and praise; in the sphere of literature and art and in the arena of violent revolutionary agitation.

Running like a thread through the varying forms of unrest with which India is tormented is a revolt of spirit, sometimes conscious, sometimes subconscious, against the denationalization of a proud and sensitive people. Many Indians have proclaimed this identity of motive behind the varying manifestations of Indian nationalism. At a time when I was engaged in fighting the revolutionary movement in Bengal and in supporting the art movement which I have described, a political writer whose sympathies were undoubtedly with the former issued a pamphlet in which he took this matter as his theme. It was a reaction against the westernization of India, he declared, that was animating all patriotic Indians, and in support of his argument that this same leaven was at work in the domain of literature and art he pointed to the rise of the Tagore School. "In Bengal," he wrote, "the national spirit is seeking to satisfy itself in art; and for the first time since the decline of the Moghuls a new school of national art is developing itself—the school of which Abanindra Nath Tagore is the founder and master."

It is because a revolt against the domination of Western theory and practice, whether in the sphere of art or in any

other field, is the driving force behind these movements, that the position of the Englishman holding an official position who is sincerely desirous of associating himself with a real rehabilitation of Indian cultural ideals is such a difficult one. For the extreme sensitiveness of many Indians whose pride in, and affection for, their country and all that it stands for in their eyes is strongly developed, tends to make them suspicious of an Englishman's motives. An example of this was forthcoming in connection with the Government grant which I had been instrumental in securing for the school. I had purposely arranged for it to be given free of conditions of any kind lest it might be thought that Government was seeking to obtain a hold over the movement. Nevertheless, my action immediately became suspect in certain quarters, and this feeling found expression in the editorial columns of the *Modern Review*, an admirably conducted periodical of much merit, with a wide circulation throughout Bengal and indeed beyond it. It was a mistake on the part of the school to have accepted assistance from Government—so ran the argument. While admitting that I had laid stress upon the fact that the acceptance of the grant involved neither official inspection, interference, nor control, the writer feared that it might nevertheless lead to a sense of obligation on the part of the school which, in its turn, might induce a conscious or unconscious deference to the official or European view of what Indian culture is or means, or ought to be or mean. To that extent he feared that the recipients of the grant would prove subject to official or European influence. "We are subjected to European and official dominance, pressure, and influence," he concluded, "in almost all spheres of life, from so many directions that we could wish that the centre of Indian culture were located even in a hut, rather than that it should be subject to any kind of non-

Indian obligation and influence." The attitude here taken up is of interest as showing how deeply the antagonism arising out of the clash of the ideals of East and West has permeated the minds of some at least of those who are affected by it.

Happily there are many whose patriotism is altogether beyond suspicion, who are ready to extend the hand of friendship to the Englishman who seeks to understand and sympathizes with the Indian point of view. I am fortunate in having received much kindness and many proofs of goodwill from the people of Bengal, and from none have I received goodwill and friendship in more generous measure than from those associated with the movement which I have endeavoured to describe.

MEMORANDUM CONCERNING THE DISPOSAL OF THE BOXER INDEMNITY FUND

(*Translation*)

BY YUAN-PEI TSAI, LL.D.

Chancellor of the National University of Peking

To those who are interested in the question of the allocation of the Boxer Indemnity Fund, I beg to submit the following proposals:

1. The principal portion of the fund is to be utilized for the establishment of a great and inspiring science institute.

It will consist of two departments: the one to contain machineries, models, and diagrams, illustrating the different stages of development of the physical and chemical sciences, and illustrating the different stages of the evolutionary processes of the industrial arts, the other to contain natural history specimens, showing the genus and species of flora and fauna—leading up to anthropology.

2. A portion of the fund is to be utilized for subsidizing any well-known universities or technical colleges in China for the express purpose of starting or extending certain special faculties or departments of sciences and technology, such as biology, textile, engineering, chemistry, medicine, agriculture and forestry, etc.

3. A portion of the fund is to be utilized for establishing within some of our national universities facilities for the study of the science, art, and literature of Great Britain. Foundation funds will be provided for (1) professorships, (2) purchases of English books on those subjects and works of art, and (3) scholarships for research students.

4. A portion of the fund is to be utilized as a foundation fund for sending teachers and graduates of the universities and technical colleges in China to the universities and technical colleges in Great Britain.

5. A small portion of the fund is to be utilized for sending scholars from Great Britain to China to study Chinese literature and philosophy, etc.

6. A small portion of the fund is to be utilized for purchasing Chinese objects of art, to be exhibited in museums of Great Britain on condition that the former unworthy ones be removed.

7. A portion of the fund is to be utilized for the exchange

of professors between Great Britain and China—namely, for providing—

(a) Distinguished scholars of Great Britain to lecture in the Chinese universities and colleges.

(b) Distinguished scholars of China to lecture in the universities of Great Britain on Chinese literature, philosophy, and art, or any other subjects appreciated by the British people.

EXPLANATORY NOTE.—The remission of the Boxer Indemnity Fund by any nation to China is generally appreciated by her people as an act of generous goodwill to their country. Her educationalists propose, by the carrying out of the above-mentioned proposals—especially the first one—to have thereby a permanent memorial of the great friendly deed of Great Britain. It will be set up in order to create a spirit of reverence for science and industrial arts—becoming, when properly equipped with laboratories and other facilities, a great centre of research and reference. As, under the present circumstances, it seems very difficult for China herself to provide such an essential, Great Britain, in co-operating with her to satisfy this urgent need of her education, will render to that country a great service, and thus earn her lasting gratitude.

Before I left China I served for a time as the Chairman of the Committee of the National Association for the Advancement of Education, that met in conference in Tsi-nan (Shantung) and elsewhere, in which, among other questions, that of the Boxer Indemnity was carefully considered. As a result, the Association, thoroughly representing all parts of China, unanimously maintained the following points:

1. That China can, and ought to, undertake her own primary and secondary education; and what is needed for that purpose is, therefore, regarded as the ordinary fund to be raised by her national and provincial authorities.

2. That the return of the Boxer Indemnity Fund by any nation should be regarded as a special fund, and be set aside for a special purpose.

3. That the Boxer Indemnity Fund remitted by Great Britain should, if possible, mainly be utilized for the great object of providing facilities in the studies of science, pure and applied.

Of the seven proposals above mentioned, the first one was strongly advocated by the said Committee, and the third and fourth were also their original suggestions, but have now been worked out in details.

Furthermore, what I have presented is not merely my personal view, but also represents a consensus of opinion in China. Such opinion, I am confident, will be taken carefully into consideration by all who are interested in this question.

THE DEVELOPMENT OF CHINESE EDUCATION

(*Translation*)

BY YUAN-PEI TSAI, LL.D.

(Chancellor of the National University of Peking)

To study the development of Chinese education some early historical review is an indispensable preliminary. In ancient China it has been found that education had always been a favourite problem with the sages or emperors. These sages or emperors who had wished a betterment of the world, being confronted with difficulties in administering State and social welfare in the mass of grown-up people, came to give their attention to the more bright and hopeful side of the educational problem.

This was, of course, a subject of anxious solicitude to the Sage Shun, who was recorded as having been the first sage to appoint a Minister of Instruction to teach the basis of human relationship. After having taught the people to sow and to reap, and furthermore to cultivate the five kinds of grain, the Sage Shun appointed Chi to teach the people "how between father and son there should be affection; between Sovereign and minister, righteousness; between husband and wife, discernment of their duties; between old and young, a proper order; and between friends, loyalty." This was quoted by Mencius twenty centuries after Sage Shun's death. Although little was known about the origin of the quotation which he had made, yet its worth as an historical fact possesses some importance as being the earliest mention of Chinese education in classical literature. Of educational development, from the Shu Ching we read another fact which throws more light upon the question. "K'wei," the Emperor Shun was reported to say in the Canon of Shun, "I

appoint you to be Director of Music, and to teach our sons, so that the straightforward may yet be mild, the gentle may yet be dignified, the strong not tyrannical, and the impetuous not arrogant" (Legge's translation). Music, evidently, was considered as a complementary training, and accounted as instrumental in modulating the emotions of youth. This seemed to be a necessary development, and dated as far back as the twenty-third century B.C. By that time the main subjects of education were, on the one hand, emphasizing moral duties, and, on the other hand, teaching the virtuous habits of the mind—that is, ethical training for being a good citizen and social training for being a moral being. These two ideas, mutually inclusive, aimed at the good relationship in the community, and that our ancient educationists endeavoured to realize, and actually did realize.

At a later period (twelfth century B.C.) more subjects were introduced, and a series of studies were brought into use, and were composed of three virtues, three conducts, six arts, and six cultures or orders of nobility for the aristocratic class; and six virtues, six conducts, six arts for the people. In some respects the methods of our ancient educationists appeared to be very similar to those of modern times which China has introduced from Western countries. Analytically speaking, what they called moral instruction took the same place practically as moral science in our modern curriculum, while among the six arts—viz., rite or propriety, music, writing, mathematics, archery, and charioteering—the last two corresponded to our physical training. Closely connected with moral instruction and physical culture is the art of calculation, and this also formed what we now call abstract or intellectual training. The teaching of rite is considered a science between the range of moral instruction and intellectual training. Examined from our modern point of view, and its entire attention to the welfare of mind and body, the period from the twenty-third century B.C. until the time of Mencius

seems an epoch of remarkable achievement in education. A still greater development was the passing away of the older institutions and the rising in their place of a great academic institute called Chêng Chün on a larger scale ; an accomplishment the results of which cannot be exaggerated, resulting as they did in creating the rudimentary form of present university education provided by the State.

About the sixth century B.C. some form of private institution on the lines of Greek academies became a prominent and influential element in the educational world. This period began to witness (among others) two great schools of philosophy which became a matter of vital interest and gave different solutions to various problems. On the one hand, Confucius was teaching China four faculties of learning—namely, morals, politics, rhetoric and literature ; while Mo Tzŭ, on the other hand, was instructing China in strategy and a working method of dialectics that was logical and descriptive. Nevertheless, Mo Tzŭ seems to have emphasized in no less a degree than Confucius his teaching of politics and moral conduct. Not the least curious of his teaching dealt with light and dynamics, with which modern science is conversant. As a matter of fact, the physical and chemical sciences were mentioned in Mo Tzŭ's work, but this genius was doomed to struggle alone. Had not the great ideas of Mo Tzŭ regarding science remained pitifully barren of results for lack of sufficient aid from contemporaries or successors, China might have been very different.

The handicap referred to above was no doubt due to the predominance of Confucianism mixed with necromancy. The necromancers represented the Confucian tradition in combating the teaching of Mo Tzŭ. From animism they had come to adopt a mystic explanation regarding all social and natural phenomena as mere functions of two forms, negative and positive ; and of five elements—water, fire, wood, metal and earth. They were narrowly restricted in the amount of information they possessed. Thus, unfortu-

nately, the Necromancian-Confucianism prevailed in the meantime both in the national institutions and in the academies which were under the management of private professors.

A philosophical change of great importance in education became prominent in the first century A.D., when Indian philosophy was introduced into China. The Indian philosophy found affinity with the teachings of Lao Tzŭ and Chuang Tzŭ, whereupon a tendency along a common path developed. Even Confucians abandoned their conception of moral conduct and politics as secondary items, and developed their metaphysical theory. In the fifth century A.D., institutes for the propagation of the science of metaphysics were established. With the eighth century A.D., Confucianism once again controlled the educational world; and particularly, the teaching of the four faculties again appeared as contents of the educational doctrine; what had been the time-honoured widening of the boundaries of knowledge occasioned by the Indian philosophy gradually faded away. From that time until the nineteenth century, schools had been only seeking to adopt the Confucian canons as their text-books, with an addition of works dealing with metaphysics. These forty centuries of Chinese education, except for the short beginnings of science and for the success of metaphysics in establishing itself, can be said to have incurred practically no interrupting changes. Only a development from the simple to the complex was taking place.

Hitherto, we have been concerned mainly with the development of ancient Chinese education, in so far as it was determined only by Eastern ideas. We have still to compare the development of Chinese education with that of English. There were the same ideas for arranging the instruction equally favourable for physical training and mental culture, the same attempt to make learning systematic. In respect to the teaching of rites or ceremonies, we find the same encouragement of what may be

called "good forms" in the education of the respective nations. Some analogy can also be formed between Chinese archery and charioteering and the English spirit of sport. Both the Chinese and English education aim at forming character and personality. In this respect they approach one another most nearly in their ideal of what education should imply. Character and learning, as interpreted by Confucius alone, were to be brought into harmony; now, this is parallel to the lines which English education has also followed.

The school of Confucius put forth the "gentleman" as the ideal of education—desiring that everyone who was educated should reach that attainment. This indeed corresponds with the education of the English "gentleman." We who read Confucian classics come again and again to the allusion of the term Chün-tzū, with which, as with the word gentleman in English, we find the same difficulty in connotating the greatness and wealth of meaning to be conveyed. To get glimpses of the Chün-tzū, let us now listen to the sayings of one or two of the representatives of the Confucian school and to a few words of the Master himself, taken at random. The philosopher Tsêng, one of the disciples of Confucius, once said to Mêng Ching-tzū: "There are principles of conduct which the man of high rank should consider as specially important: in his deportment he should refrain from violence, in his expressions he should keep himself near to sincerity, and in his words and tones he should avoid as far as possible impropriety." Others consider that the gentleman "should adjust his garments and hat in a proper manner and should preserve a dignity in his looks." It follows that he can behave with a dignified ease without being proud, and be majestic without being fierce. These and other statements as to the attitude of a gentleman centre round the point which the English educationists have advocated just as emphatically. In the temper and disposition of a gentleman, the Chinese find the characteristic of appreciating righteousness as an

essential. "He performs everything according to the rules of propriety, brings it forth in humility, and completes it with sincerity." Furthermore, "he honours the talented and virtuous, and bears with all. He glorifies the good and pities the incompetent." In the gentleman himself, we find these characteristics: "being benevolent and free from worry; being wise and free from doubtful hesitation; and being courageous, free from fear." In his accomplishments, we find the "right harmony of simple plainness and elegance." In respect to moral power, the Chinese educationist stipulates as gentlemen those "who can be entrusted with the charge of a young orphan prince, or be commissioned to deliver a message to a State hundreds of miles away, and whom no emergency, however great, can drive from his principles." "He harmonizes himself with his surroundings, but does not compromise his principle." "He stands erect, and does not lean on anyone or on anything apart from himself." Such is his strength and reliance in a trustworthy self. The above are a few of the positive examples of the gentleman's achievements; but negatively there is the strong warning and denunciation against the "false gentleman" or "mere aristocrat"—just as in Western lands there is terrible and keen criticism of the hypocrite. This kind of training for a gentleman has undoubtedly the same importance in the development of Chinese as in English education.

In passing from the resemblances to the differences between English and Chinese educational ideals, we find two divergent points. The first and the most obvious cause of difference lies in the fact that an Englishman, while in infancy, is fostered in his higher development by some religious conceptions, and consequently forms his beliefs which will be a guide to his after-life. In China the parents, save in very exceptional cases, do not interfere with the freedom of their son's beliefs, and they therefore are entitled to assert their right of belief—public opinion generally expressing itself in favour of it. Secondly, we

feel the advantages in the scientific teaching and equipment in England and our defects in this respect. The former point is, however, of no concern to us here at this juncture. Concerning the latter point we must express a desire that our education should make headway towards a much greater development of scientific education. In England, not only the laboratories in the Universities, but also the societies for the research of science, are all well equipped. There are four national museums controlled by the Board of Education here, in which whole collections and unique specimens are accumulated. Consequently, there exists here in England such an atmosphere of science that though the scientists have to bear the burden of extending the boundaries of the realm of science, yet the work can be appreciated and shared by the general public — who themselves realize the importance and far-reaching effects of science. Also, philosophical and other thinkers and writers naturally acknowledge their debts to science and run less danger of trying to build their thoughts in the empty air. In this respect, China has nothing to correspond to it. You have both the ideal scheme and the actual establishment exemplified in the Science Museum and Natural History Museum at South Kensington, whose influence can be seen to have been exercising a considerable effect upon education. But in China our education for at least two thousand years has aimed at no higher scientific teaching than to mould the man with a perfect character and give him a literary equipment.

Though in contact with the West from the thirteenth century A.D., we have learned very little about physical science, except the evil effects of it. A few centuries elapsed before the Catholic missionaries came to China with their knowledge of Aristotle's *Logic*, Euclid's *Geometry*, and other applied sciences. Until recently, in the last half-century, China has undertaken no educational reform, so far as natural science is concerned. She has now recognized that the regeneration of her ancient

civilization will be a reality if the rising generation can be educated on new lines. What China in her first attempt at educational reform wished to accomplish has been realized in founding colleges and special institutions. In 1865 there was founded in Shanghai a Kiang Nan (Munition) factory on a scientific and technical basis, which to-day occupies a spacious ground on a magnificent scale. The example was quickly followed by the establishment of colleges on European lines, a pioneer school of mechanics being started in 1867. After this, in all the earlier efforts to develop our education, schools or colleges of technical science maintained their lead, with other schools following at a respectful distance. A school of shipbuilding was also founded in 1867, and a school of telegraphy (1876), a naval school (1880); Pei-Yang University (1889), Nan-Yang College (1897), and Peking University (1896), were established successively. Again, a body of young students was sent to England, France, and Germany, with a view to studying shipbuilding, engineering, and other subjects. As bearers of knowledge and ideas from the outside world to China they were by far the most effective and efficient. But the privilege of studying abroad could only be enjoyed by a limited number of selected students and even for them we did not provide an adequate school for their preparation. The opening of these colleges, as stated above, so valuable in themselves, could not be regarded as having solved the problem. Our difficulty consisted mainly in the shortage of the existing colleges. Something more than sending students abroad and establishing colleges was needed to remedy the defects. Because of the insufficient accommodation of colleges, a number of students went to the missionary schools, where they acquired the knowledge of a foreign language and some elementary sciences, both applied and pure. For this much we give them credit. The Government were, however, not behind-hand in desiring to substitute in their place other institutions of equal or higher standard. A circular of regulations, based on the

resolutions, adopted in some conferences of professional educationists and teachers, for providing facilities for our schools, was promulgated in 1902, since when the number of students in the missionary schools and colleges has proportionately decreased. In 1910, statistics showed that the number of Chinese students in fourteen British and American Missionary Universities only just exceeded 1,000, while in the National University of Peking alone we had more than 2,300 students. This was, of course, due to the fact that the door of the newly established Chinese national institutes was opened wide to them, but certain defects inherent in the missionary schools, such as neglecting Chinese history, literature, and other subjects, were also apparent. As we all know, whenever a missionary school is founded, religious instructions of some sort are propagated, bringing about new effects and influences, thereby contradicting the Chinese educational tradition. There is much to be said on this point, but there are signs that a certain tendency in the direction of development of our own education is in progress.

It is interesting to outline the growth of interest in the study of physical science in China and the urgent need for the extension of education both in pure and applied science. The last twenty or thirty years have given birth to a new spirit in the pursuit of science throughout China. Nearly every school there possesses some apparatus and instruments similar to those employed for scientific investigations in European schools, and also laboratories, in each of which are to be found teachers and students studying sciences, such as physics, chemistry and biology, etc. Especially our Universities, by devoting their supreme strength and energy to the development of scientific education and its application, hope that China will soon be able to contribute, through scientific discovery and industrial development, new culture in the modern world; but their effort has not so far been crowned with success. It is perfectly true that though we have already recognized the

value of scientific research as one of the most important factors both in the material and intellectual progress in China, yet how far the scientific spirit is really influencing our thought, and how far it is likely to find expression in reality, is still doubtful. It is simply and purely due to the fact that no facilities have been granted to those who are engaged in research for maintenance, appliances, and other expenses ; and that those who have received a scientific or technical education abroad find, when they return to China, few opportunities of continuing their important studies. Our educationists have, however, a project of establishing an institute on a larger scale, after the fashion of the Science Museum and the Natural History Museum at South Kensington, together with research departments. The institute will consist of two departments : one to contain scientific instruments and apparatus, models and diagrams, and machinery, illustrating the different stages of development of physical, chemical and other natural sciences, and also the evolutionary processes of industrial art. Zoological and all other natural history specimens will be exhibited therein, their proper relation, showing the germs and species of flora and fauna, and leading up to anthropology. The funds necessary for making a start with such an institute were estimated at £10,000,000, and the site proposed is either at Nanking or Peking. But at present our educationists are confronted by the stringent financial conditions prevailing throughout the country, and under these circumstances it seems very difficult for China to carry out the scheme. We are confident, however, that other great nations will help us to some extent by co-operating with China in her scientific enterprise. The forthcoming remission of the Boxer indemnity on the part of Great Britain we deem as an act of generosity and good-will. This was verbally communicated to the Chinese Government in 1922, and has since raised an increasing interest in the respective countries. It now appears to be the considered view of the Chinese educationists that the Boxer indemnity, when re-

mitted, should be used for the purpose of commemorating the friendship of Great Britain and China in a permanent form, and therefore it should be utilized for the establishment of this great institute. There seems every prospect that the proposed institute, entrusted with the responsibility of giving higher education and inspiration in science, will become a centre of reference and research. This suffices to show the general hope of the Chinese people as a whole, and of the educationists in particular, regarding the question of the remission of the indemnity.

In educational development in China there may be other tendencies, but so important and desirable is the need for creating a new centre of scientific studies that this should be especially emphasized. What has been outlined, however, is the general development of our educational reform rather than its details, however interesting each may be in itself.

"FINDS IN MONGOLIA" (*Page 527*)

AUTHOR'S NOTE

I find that M. Henri Cordier in his *Notes and Addenda* (1920) to Yule's "Marco Polo," pp. 53-55, gives an account of the City of Etzina, which he identifies with Kozloff's Khara-Koto or "Black Town" (1908-09), and with Hei-shui or Blackwater of the Mongols. He says that a number of Si Hia books were found in a stupa there and carried therefrom to St. Petersburg. But it is difficult to reconcile this with the newspaper report, which distinctly says Kokonov. Moreover, Chavannes has shown that Kurkarausu was also called Hei-shui, and this much earlier.

COMMERCIAL SECTION

INDIA'S TRADE

(Contributed by the Indian Trade Commissioner)

THE recent publication of India's trade statistics for the financial year April, 1923, to March, 1924, affords an opportunity for reviewing the present position of Indian trade. The past three years have been years of consolidation and progress, following the dislocation caused by the war, the post-war boom, and the succeeding slump. During 1919 and 1920 Indian exports attained a very high figure; and it was on the strength of the foreign credits thus secured that she was enabled to place extensive orders for foreign goods during 1920 for execution that year and in 1921. It is an interesting fact that the total of India's exports during the two years 1919 and 1920, to the value of 600 crores of rupees, is almost identical with the total value of her imports during the two years 1920 and 1921.

India's official statistics are registered in financial years (April to March), and it is convenient to adopt this period. The year 1921-22 registered an adverse balance of trade; at the same time the indications for future trade were hopeful. In the first place, the rupee had sunk to a more normal level from the dizzy heights which it attained during the early months of 1920. In the second place, India commands a large proportion of the staple commodities which are essential to the rest of the world if existing standards of civilization are maintained. Her stocks of imported goods were then high and her requirements from abroad were *pro tanto* reduced, partly on account of the liquidation of stocks and partly on account of the fall of world prices, which invariably discourages purchase. Hence it is that imports, which were valued at 266 crores

of rupees in 1921-22, fell to 232 crores in 1922-23, and 227 in 1923-24.

While stocks of goods in India were being reduced, the same process was occurring in the world's markets generally. Indian jute, Indian cotton, Indian hides and skins, Indian rice and wheat were in increasing demand in foreign countries, and Indian exports responded to the stimulus. In 1921-22 India exported goods to the value of 245 crores of rupees; in 1922-23 her exports exceeded 314 crores; and in 1923-24 they attained a record of nearly 362 crores. The result is seen in the calculation of India's balance of trade, which was converted from an adverse balance of nearly 32 crores in the first of the three years mentioned to a favourable balance of nearly 25 crores in 1922-23; while the favourable balance was increased last year to nearly 62 crores. These developments were accompanied by the gradual appreciation of the rupee, which at the time of writing stands at 1s. 5d.

Commercially, therefore, India is in a strong position. Not only is the rupee slightly above pre-war parity; her export trade has advanced considerably beyond pre-war values. The total value of 361 crores of exports in 1923-24 is an absolute record for any one year, while the last month of that year, March, 1924, recorded an absolute record for the export trade of any one month—namely, 41 crores of rupees. It is impossible to compare exactly the quantities represented by these values; exports in 1923-24 were roughly 62 per cent. in value in excess of the annual average value of India's export trade before the war. As India's general price level is about 75 per cent. in advance of pre-war prices, she has presumably a small leeway to make up before she can be said to have attained her pre-war volume of exports.

WHERE EAST AND WEST MEET

SARKIS KATCHADURIAN'S EXHIBITION

THE exhibition of the art of Sarkis Katchadurian, shown at 9, St. Paul's Studios, Baron's Court, was inaugurated, on May 29 by the Persian Ambassador, who delivered a very appreciative speech. The oils, water-colours, and drawings are illustrative of the landscapes and the people of Armenia, concerning whose ancient civilization and Gothic churches Professor Strzygowski has given such an interesting account in his "Origin of Christian Church Art" (see review on page 365, *ASIATIC REVIEW*, April, 1924).

The artist shows us glorious sunsets, rich landscapes, and a people with furtive looks and anxiety in every movement. Especially fine are his pictures representing "The Blue Mosque at Erivan in Winter," and "The Abandoned Church." He also exhibits water-colours of Mount Ararat, which, according to Armenian tradition, was the first resting-place of Noah's Ark after the Great Flood.

Although his artistic training was received in Paris, Sarkis Katchadurian has succeeded in imparting to his pictures a true atmosphere of the Armenian land, thus expressing the deep sympathy he feels for his own country. Mr. Brangwyn has introduced him to us in London, and we certainly owe him a great debt of gratitude for having done so. It is to be hoped that here, too, his art will meet with the success it deserves.

L. M. R.

THE JUNCTION OF THE HIGHWAYS IN PERSIA

Père A. Poidebard gave a very interesting lecture before the Central Asian Society, in May, on "The Junction of the Highways in Persia," Sir Maurice Bunsen taking the chair.

The lecturer, who spoke in excellent English, explained how, in 1918, he joined a mission of Frenchmen who made their way to Bagdad via Cairo, Aden, and Bassorah. He there became attached to General Dunsterville's staff. At that time the only practicable way of reaching Russia from Europe was via the Caucasus.

He came to the following conclusions :

"It has been remarked that unless one knows Persia it is difficult to understand events in Asia. I may add that, unless one knows the geographical meaning of the routes in this part of Central Asia, it is not possible to understand aright the great movements which, like a mighty tide, alternately rise and fall between Europe and the Asiatic continent.

"The historic routes of Asia—the Royal Way of Darius, the Roman Silk Way, the routes of invasions—are as important as ever. To-day their names are : the road to India by land, the oil route, the central route of Asiatic Islam.

"In spite of her defective communications, Persia is, and remains, therefore, a vital point, a great junction of the roads of Asia. Without a knowledge of the Persian highways it is hard to understand the tangled skein of Eastern problems which have their centres of fermentation not only on the shores of the Bosphorus, but especially east of the Black Sea."

FINANCE SECTION

DIFFICULTIES OF BANKING IN INDIA

By B. B. DAS GUPTA

BANKING in India has to fight with some peculiar difficulties. Being primarily an agricultural country her finances are practically dominated by her harvests, and the natural consequence is a periodicity in the demand for credit—a slack season with much idle funds and a brisk season corresponding to a country-wide movement of crops. A bank-rate pendulum that usually swings from a 3 per cent. rate in August to an 8 per cent. in February certainly calls for unusual powers of mobility and readjustment on the part of the banking interests that are to follow it. If the rate had always been 3 per cent. in August and 8 per cent. in February—if, in other words, the periods of the lowest and the highest rates of interest could be anticipated with unfailing correctness—bankers could have got over this difficulty by tapping the cheaper money-markets of the world in times of stringency and unloading a portion of their funds in foreign markets that wanted them, when the home market suffered from a glut. Even then, as I shall point out later, these operations by means of finance bills would not perhaps be widely undertaken, on account of the uncertainty of the Indian Exchange. But no exact calculations beforehand are at all possible, and they can never be possible so long as the causes that produce the alternate swings remain what they are. Instability that is born of agricultural happenings hardly lends itself to any law or method. This is why we find the maximum rise or the minimum fall in the bank-rate constantly moving from one record to another and one month to another—deviations that hinder their setting right by speculation. This

uncertainty is well expressed in the statement that the Indian finances are a gamble in rains. A failure of the monsoon might therefore upset the whole mechanism of credit and a bumper harvest might find the bankers unequal to the demand for accommodation. Occasional famines sweep over parts of the country and react on the banker's business as well as on his profit. Such a state of things could only pass away when industries on a befitting scale, manufactures, transport, and so on, would have been started all over the country, and which, widening the field for the employment and collection of the banker's funds, would have compensated the depression in any one direction. With India's rapid strides towards industrialization, coupled with the earnestness with which both the Protectionists and the Free Traders want, by imposing their respective systems on her, to lead India on to the same goal, it is to be hoped that this particular difficulty of banking in India will soon—let us say within a short period of five centuries—entirely pass away.

Another long-standing difficulty has been the uncertainty of the rupee exchange. The financial policy of the Government of India has been, properly speaking, marked by the lack of any policy at all, and the way in which our monetary system grew up, from an early silver monometallism, through a period of virtual bimetallism, ultimately to be based upon what has been called the gold exchange standard, has been too piece-meal and of too drifting a nature to inspire confidence in banking interests. Experiment after experiment finds the rupee as unmanageable as ever. This has considerably hampered the establishment of an equilibrium in the Indian money rate and also caused wide variations between it and the rates ruling in London and Paris. Mr. Keynes calculates that, taking the costs of remittance both ways between London and Calcutta to be $\frac{3}{8}$ d. per rupee, a transfer of funds temporarily from London to Calcutta would only be a profitable business proposition if the Indian rate was at

least $2\frac{1}{2}$ per cent. above the English. If it is less than that the costs of sending funds to India and bringing them back at the end of three or four months—because high rates do not rule all the year round—would swallow up any possible gain due to the difference in the interest rates. At a time when exchange breaks loose of any mooring-point, the costs of temporary investment of funds in India become an unknown quantity, and no relief can be sent to a market which is even prepared to pay any price for loans. What is true of short periods is also to some extent true of long periods, and to my mind the uncertain value of the rupee, by affecting the value of possible expected dividends in future, has affected the migration of banking and other capital to India. It was, among others, one of the reasons why the constitution of the Presidency banks was made so rigid, in terms of which they were absolutely to refrain from any business in foreign exchange. The fickle rupee has thus made what otherwise would usually be regarded as a legitimate province of banking—namely, dealings in foreign exchange—a highly speculative affair. We are too much accustomed to discuss the effects of a fluctuating exchange on trade and Government finance, but its effect upon the banking development of the country can never be minimized. It is not easy to suggest any means by which a stabilization of the value of the rupee may be brought about, and it is highly improbable, so long as such an automatic corrector of price-levels as the gold standard is not reintroduced, that any measures by any country can assure it a permanent stable exchange. For the purchasing power parity which controls the relative values of currencies in terms of one another is disturbed by changes in any one of the two price-levels concerned, the Home or the foreign, and if the price-levels abroad are constantly changing, the modification of the internal price-level, to suit that, will become like a race with an uncontrolled motor-car running in all directions. But there are signs to show that all countries are gradually settling down to fixed price-levels

and banishing ideas of inflation. If this reading of the situation is true, there is no reason why, proceeding cautiously along the Ricardo-Cassel line of modifying the price-level, it would not be possible to maintain a token high-value rupee at 1s. 8d. or 2s., or even higher. The rupee, like the paper note, can be made to command any value—if its supply be reduced.

A third great handicap from which banking in India had for a long time been suffering, and which happily has now been partially remedied, is the lack of any system of co-ordination amongst the different banking units in the country. It is curious that although almost all Indian institutions have been more or less modelled on English lines, the effort to import into India something like the solidarity of the English banking system, with the Bank of England as the crown and apex of the system, has met with such a small amount of success. It is a well-known fact that the Indian-managed banks that failed in the crisis of 1913-14 complained that with help from the European banks they could have easily tided over the difficulty. That help was not forthcoming. I do not, of course, suggest that bankers who are really incompetent should be subsidized by any help from others, nor do I contest the opinion that a wholesale destruction of bad banks is, perhaps, the only safe and sure preparation for the development of sound banking. But what I want to indicate by this illustration is that even ten years ago the banking world of India was divided into distinct groups, each having hardly any connection with the other. The evils of such stratification, which narrows down the outlook of the different layers and of the whole, are now greatly removed by the establishment of the Imperial Bank of India. Already, after the failure of the Alliance Bank of Simla, the Bengal National Bank found itself in a difficult position, and, but for the timely assistance of the Imperial Bank of India, would have, according to its directors' report, possibly gone to the wall.

Bankers in India have also to cope with a formidable difficulty in the lack of banking habits of the people. To the great mass of Indians hoarding is still a considerable attraction. Until, with the growth of education and spread of banks all over the country, this is overcome, the Indian banker will always have an uncomfortable time. The habit of hoarding is perhaps as much a cause of slow banking progress as its result. People saved when there were no banks, and naturally stored their savings in unknown places for the sake of safety. In out-of-the-way places, outside the reach of banks, I think it is the lack of proper banking facilities that mainly explains hoarding to-day, rather than a mere desire to pile up hidden wealth. Whatever be the true psychology of the hoarder, the fact remains that it is standing in the way of any effective mobilization of the country's capital. Much is expected in this direction of the hundred new branches of the Imperial Bank of India that are to be started within 1925. Valuable as this financial irrigation would be, one ventures to suggest that, in order to make these town branches as effective instruments as possible to charm out the hidden funds, they should be further reinforced by a system of agents in the country, who will thus carry out first-class banking facility to the door of the rich villager. The gradual dilution of the currency of the country by the introduction of paper rupee notes of small denominations will also help to minimize the attractions of hoarding. The difficulty, however, cannot be removed by a stroke of legislation, but must be left to disappear in course of time.

Not least among the problems of Indian banking to-day is that the Indian banker is often asked to furnish a class of credit which he, consistently with his character as a deposit banker, cannot possibly supply. I refer to loans to agriculture and loans to infant industries. It means in the first case loans upon bad security, and in the other case loans for long periods. Happily, India has wakened up to the necessity of having special lines of banks for doing

these special kinds of work. The co-operative banks have taken a firm root in the country, and no better means could be devised to fight agricultural indebtedness which appeared in India, as everywhere else, as the consequence of the commutation of rents in kind to money rents. The problem of industrial finance is being solved by the creation of industrial banks, on the lines of the German and the Japanese industrial banks. But work in this respect has not made much headway. A small number of banks had been started with the intention of financing industries. They translated a still smaller fraction of their intentions actually into practice. It is to be hoped the recent merging of the Tata Industrial Bank into the Central Bank of India will not act as a set-back to the further development of banks of this class. It would, however, be hardly wise for the Central Bank of India, constituted as it is, to attempt to take up the work of financing industries. That calls for special equipments which it does not yet possess. In Germany banks financing industries are usually represented on the management of the industries concerned. In India the combination of a good banker and a good industrialist in one and the same person or in one and the same institution is yet to be seen, and any hasty attempt has its dangers. I would consequently wait for new institutions on German lines, rather than precipitate the existing banks into the work of financing industries.

Next may be noted, as an obstacle to the rapid development of banking on Western lines in India, the existence of a slow-dying army of indigenous banks, the Pedhis, Shroffs, Marwaries, Mahajans, and so forth. They do not take part in the financing of the external trade of the country, but their share of the internal commerce is still considerable. The blame for this delaying of scientific banking in India rests partly with the monopolistic nature of the East India Company, which did not, until the Charter was modified in 1813, allow any British Company to be formed for banking business in India. The result

has been to give the indigenous banks a lead in the matter of financing the internal trade of the country, and the momentum has simply kept them going ever since, in spite of their unsuitableness, in many ways, to modern conditions. One has but to look at some of the characteristics of the "Pedhi," for instance, of the orthodox type, to judge if they are really banks or are only apologies for them. The Pedhi has no share-capital, he has unlimited liability; his own house, however inconveniently situated it might be for his customers, is his office; he takes very little deposits, if any at all, and does not even consider Government paper a sufficiently safe collateral for advancing loans; no cheque system, no published accounts, an exclusive caste monopoly of organization, a high rate of interest, occasional participation in trade, and an altogether narrow view of his duties and responsibilities. I would be the last man to deny his services to the country, but I would either like him to specialize, and evolve as a discounting house of internal bills, and give up his pretensions as a bank, or make room for more up-to-date institutions that will effectively combine the many functions that a bank is called upon to perform. The question, it seems to me, is not to choose between a Pedhi bank and a Joint Stock bank—for the Pedhi is not a bank at all—but to judge whether the Pedhi is not an obsolete and a totally insufficient institution to meet the growing banking needs of India. And on this point Dr. Dhume—who, in his unpublished thesis for doctorate, seems to have made a most extensive study of the indigenous banking system—remarks that he has never found any evidence to support the view that they have at any time financed industry or national development. As a commentary upon their honesty he notes elsewhere how, after the passing of the Bankruptcy Act, there have been many records of wanton failure. I maintain that the Pedhi, by locking up a great amount of funds in what may be described as only a part of banking work, and even not showing the best of efficiency in that limited field, has pre-

vented a maximum economy of India's none too great banking capital, which, if it were in the hands of joint stock banks on modern lines, would have been the basis of a variety of banking services. His simple establishment, and the cheapness of his credit in the sense of a not too strict insistence on formalities, help him to compete with the banks. It would have been well if he could be developed into the modern bank, but in view of the conservatism to which he is wedded, such a development is not likely to take place.

Lastly, the absence of any Bank of England in India, a credit in whose books might be regarded as so much cash by other banks, led bankers there to look up to the State paper currency department for the creation of emergency currency, and in this respect the rigidity and inelasticity of the note issue system has long been a subject of complaint. A great improvement in this direction has, however, been recently made. Not only has the system of holding the reserve been changed from what was called the partial deposit method to a proportionate deposit method, but provision has also been made, as an experimental step, for the issue of notes against bills of exchange of a short maturity, thus establishing an automatic relation between the growth and shrinkage of commerce on the one hand and of note currency on the other. Much, however, still remains to be done. The maximum limit of issue against bills has had, due to the pressure of commercial opinion, to be increased this year from 5 crores to 12 crores of rupees, but it may be necessary to raise it still further. Besides, the rate of interest charged by Government from the Imperial Bank of India for the notes issued now stands at 8 per cent.—a rate which has also been objected to by mercantile opinion.* The present distinct separation

* Last July, introducing the Bill to amend the Indian Paper Currency Act, Government announced its intention to adopt a sliding scale in relation to the issue of emergency currency. The plan, which has perhaps been now put into operation, provided for an issue of 4 crores of rupees of

between the paper currency reserve and the banking reserve also hardly conduces to economy of reserves; but, in this direction, the transfer of the management of the paper currency to the Imperial Bank is also in sight—I mean, if it is not visible to the naked eye, it can be seen through a telescope.

These, briefly speaking, are the difficulties that banking in India is beset with. Some of them, as we have seen, arise out of the peculiar nature of the country, and some are of Government making, but most can be remedied. Except upon the Imperial Bank of India, Government has imposed hardly any restrictions upon Indian banks. To my mind, this excessive freedom has been, in itself, both a curse and a blessing. The only economizer of legislation is publicity, and having no legislation to bind them, Indian bankers are also at the same time avoiding the only condition—namely, greater publicity—which guarantees a safe working of the banking machinery in the absence of legislation. The problem of banking control being as much desirable as it is impracticable, steps ought to be taken to ensure greater publicity. Working on sound lines, a great future ought to await banking in India.

self-liquidating notes against approved internal bills of exchange, as long as the bank-rate did not exceed 6 per cent., for a maximum issue of 8 crores as long as the rate remained at or below 7 per cent., and for a further instalment of four crores if the bank-rate exceeded 7 per cent. Although, as the Finance Member pointed out, there was nothing sacred or final about any particular scale or any particular maximum issue, the arrangement, like the system in vogue in pre-war Germany, would bring about a closer mutual response between the bank-rate and seasonal currency. To judge from the recent behaviour of the Imperial bank-rate which leaped up in quick succession from 5 per cent. in the middle of November to 6, 7, and 8 per cent. on January 3 last, and has ever since remained at that high point, there would seem to be a need for a still further slackening of the screw in favour of emergency issues. While experience about these issues in India is still too short to define exactly a policy that would do away with seasonal scarcity altogether, and at the same time not bring in any new complications, it may be safely asserted that India is now on the right way for a solution of the problem. There is everything to recommend the Government in its cautious advance in this matter.

SCIENCE AND MEDICINE SECTION

ASSYRIAN MEDICINE

BY WARREN R. DAWSON

ACCORDING to Herodotus (I. 197) the Babylonians had no physicians, and brought their sick out into the market-places in order that passers-by might confer with them upon their symptoms, in the hope that the patient might elicit from someone who had been similarly afflicted, advice as to how to proceed to effect a cure. Whether this be true or not, their neighbours the Assyrians possessed considerable medical knowledge of which a mass of documentary evidence has come down to us.

Up to the present but few medical texts have been published. From their very nature, being inscribed in cuneiform characters on brittle clay tablets, these texts are extremely fragmentary. In the library of Ashurbanipal at Kouyunjik thousands of tablets have been discovered, dealing with a variety of subjects, and are now in the British Museum. In 1906 Mr. Campbell Thompson commenced a systematic study of Assyrian medical literature, and at once came to the conclusion that the material must be worked over as a whole, and that to continue to publish isolated fragments would lead to no solid result. Accordingly he set to work to collect, transcribe, and study this great mass of tablets, and as evidence of his industry, patience, and scholarship we now have before us the text of 660 cuneiform medical tablets.* In 107 plates of foolscap size these texts are admirably reproduced in clear and

* "Assyrian Medical Texts from the Originals in the British Museum," by R. Campbell Thompson, M.A., F.S.A. Oxford University Press. 1923. Price £2 2s.

legible characters. It is difficult to convey any idea of the immense labour involved in deciphering, transcribing, and lithographing this vast amount of material. Having established the texts, the next step is to translate them, and this Mr. Campbell Thompson has commenced, and the first part, reprinted from the *Proceedings of the Royal Society of Medicine*, has recently appeared.*

From the translations before us we can at once perceive a great similarity between Assyrian and Egyptian medical books. Both arrange their prescriptions in the same manner, both are strange mixtures of rational therapeutic treatment with magical spells and incantations. There cannot be any doubt that ancient medicine, both Egyptian and Assyrian, had its origin in magic, and that magic never completely lost its hold upon its offspring, even when the latter had grown to years of discretion and knowledge, and experience had begun to displace sorcery and tradition more and more. Many of the drugs used, even when wholesome and appropriate, must have found their way originally into the pharmacopœia for magical reasons. Most of the Assyrian texts are very fragmentary and full of lacunæ. We will quote a few specimens from those which are best preserved :

“ If a man’s eyes are sick and full of blood, unguents (only) irritating (?) the blood, blood and tears coming forth from the eyes, a film closing over the pupils of his eyes, tears turning to film, to look oppressing him : thou shalt beat leaves of tamarisk, steep them in strong vinegar, leave them out under the stars ; in the morning (*i.e.*, on the morrow) thou shalt squeeze (them) in a helmet : white alum, storax, ‘Akkadian Salt,’ fat, cornflour, nigella, ‘gum of copper,’ separately thou shalt bray : thou shalt take equal parts (of them), put them together ; pour (them) into the helmet (in) which thou hast squeezed (the tamarisk) ; in curd and šuniš-mineral thou shalt knead (it), (and) open his eyelids with a finger (and) put it in his eyes. (While) his eyes

* “Assyrian Medical Texts.” London : John Bale, Sons, and Danielsson, Ltd. 1924. Pp. 34, 8vo. Price 2s. 6d.

contain dimness, his eyes thou shalt smear, and for nine days thou shalt do this."*

This prescription is followed by three alternative preparations to be similarly used. Here again we have an analogy with the Egyptian medical prescriptions, for in nearly every case in the latter a number of alternative remedies is given for each complaint.

The text we have just quoted is almost entirely therapeutic, the only magical element in it being the direction to "leave them out under the stars"—*i.e.*, expose the medicine to the magical influence of the stars.

"Thou shalt disembowel a yellow frog, mix its gall in curd, apply to his eyes."†

"Blood from a pig's heart [thou shalt pour] into his eyes."‡

"If a man's eyes are full of blood, thou shalt bray yellow sulphide of arsenic in curd, apply."§

As a specimen of an incantation we may quote the following. The spell has to be recited after applying arsenic to the eyes:

"Charm: sound front, sound back, smitten front, smitten back. Flesh multiplieth flesh, blood produceth blood, dung createth dung! Perform, O Gula, the high Charm of Life! Let them bring nigh the cataplasms (which) thou hast arranged (and) grant recovery! Recite the Charm E.NU.ŠUB."||

The *materia medica* were extremely numerous; animals, vegetables, and minerals of many different kinds being employed. The great majority, however, are plants or substances of vegetable origin—gums, balsams, resins, and the like. These are so numerous and play so prominent a part in the Assyrian medical texts that no progress can be made towards a full understanding of the subject without a detailed study of them. Mr. Campbell Thompson has supplied this want in his third book,¶ which forms an

* *Op. cit.*, pp. 28, 29.

† *Op. cit.*, p. 23.

‡ *Op. cit.*, p. 27.

§ *Op. cit.*, p. 26.

|| *Op. cit.*, p. 28.

¶ "The Assyrian Herbal." London: Luzac and Co. 1924. Price £1 10s.

important contribution, not only to Assyriology, but to the history of medicine and botany, and, indeed, to the early history of man's scientific endeavours.

This book is described as a "monograph of the Assyrian vegetable drugs, the subject-matter of which was communicated in a paper to the Royal Society, March 20, 1924." It deals with some 250 different species. The frequent necessity of using special signs, and Hebrew, Syriac, Arabic, and other characters, would have made the book very difficult to produce, and its price prohibitive, had it been set up in printed type. The author has accordingly had recourse to autography, a method of printing which is becoming increasingly necessary, in spite of its obvious disadvantages, in scientific works generally, and especially those which deal with Oriental languages. The plants are classified according to their Assyrian names, and elaborate indices of Assyrian, Sumerian, Syriac, Hebrew, Aramaic, Arabic, Persian, Greek, Latin, and English names are appended. The author has worked out each plant separately, and has succeeded in correcting many current translations which prove to be wrong, and has identified for the first time a great number of plants the names of which have been previously unknown. As the result of his labours, the great majority of plants which occur in the Assyrian medical texts can now be said to have been identified. Would that the same might be said of the hundreds of plants which occur in the Egyptian medical papyri! Doubtless what Mr. Campbell Thompson has done in Assyriology could likewise be done in Egyptology, could only a competent scholar be found who is willing to undertake the task. The results are obtained by philology, by the details of the natural history of the plants themselves, by their properties and uses, and by analogy with the medicinal plants described in the medical books and herbals of the ancient nations. The present writer has long been engaged upon an attempt to work out the Egyptian *materia medica*, and the Assyrian herbal will doubtless furnish many

valuable clues and suggestions, and is an important addition to the store of parallel medical and botanical literature, which is all too scanty.

That the Greeks borrowed largely from the Egyptian *materia medica* has long been evident. In Dioscorides, for instance, many drugs may be found which have their origin in the papyri. From a study of the Assyrian herbal we now have evidence of a similar borrowing from Assyria ; of such annexations of plant-names the mandragora, or mandrake, is a case in point.

Mr. Campbell Thompson, by means of a series of ciphers, has clearly distinguished between identifications which are certain, probable, doubtful, or uncertain. He is cautious throughout, and gives solid evidence for every fact assumed or suggested, and his herbal is a monument of scholarship, acute judgment, patience, and industry. It is, as we have said, not merely a contribution to Assyriology ; it is one more link forged in the chain which must be used for any critical and well-founded reconstruction of the ancient civilizations of the East, which had reached old age and death whilst the culture of the West was in its infancy. The culture of the Western world is the well-husbanded fortune inherited from the great nations of the Orient, which were the birthplace and the cradle of the intellectual history of mankind.

ARCHÆOLOGICAL SECTION

FINDS IN MONGOLIA

(*A Second Russian Expedition*)

BY PROF. E. H. PARKER

UNDER the above title the newspapers have recently somewhat vaguely alluded to the first Russian expedition headed by Professor Kozlov in 1907, and to the discovery then made of "books in Persian, Arabic, and Hindoo script, as well as volumes in Mongolian and Chinese," in a cone-shaped monument outside the ruins of "Kara-khoto city," which was in the vicinity of "Kookonor, a lake no white man had ever seen, although French and German explorers had tried to reach it." Surely Przewalski in 1880, Rockhill in 1892, and Futterer in 1898 had no difficulty in reaching Kookonor? As to Kara-khoto, this name, which I cannot find anywhere, may be the Sharakoto mentioned on page 597 of the *N.C. Herald*, September 9, 1910; in other words the Shala-koto visited by Rockhill, a few miles south of Donkyr or Tankar, on the high road from Si-ning to Tibet, and in very close proximity to Kokonor or *Khukhe-Noor*—the Blue Sea.

It was also in 1907 that M. Paul Pelliot made his remarkable journey from Andijan all the way through Turkestan by way of Turfan, Hami, and Tun-hwang to Peking. In reading the newspaper extract above-mentioned, I thought at first that the mysterious Kara-khoto must be the well-known Kara-hodjo in the Turfan region, upon which place M. Pelliot published an exhaustive pamphlet in the *Journal Asiatique* for May-June, 1912, entitled "Kao-tch'ang, Qoço, Houo-tcheou, et Qarâ-khodja," a place that is frequently mentioned under its various Chinese

names, dynasty by dynasty, in "A Thousand Years of the Tartars" (Geo. Routledge and Sons); but, although M. Pelliot actually passed through Turfan on his way from Urumtsi to Hami and Tun-hwang—*i.e.*, to the Thousand Buddha Grottoes—he does not make mention of any stay there, still less of any supposed *caches* of ancient literature at Turfan, where, however (or at the group of alternative "capital" towns in the immediate vicinity), it is highly probable that such *caches* will, some time or other, be found. Ever since the first definite occupation by the Chinese in A.D. 640, Turfan has been a Turkish or Ouigour State enjoying local self-rule, in Manchu times as a Mussulman centre. In August, 1910, just before the Manchu dynasty came to an end, the "*Djassak* (= Ruler) Muhammadan Prince Emin Hodjo" was rewarded for loyal services, and in June, 1913, the same Emin Hodjo, in reward for his fidelity to the Republic, received a higher (Manchu family sense) princely title. In December, 1915, the same Emin Hodjo sent word that he was too ill to visit Peking. In August, 1919, his eldest son, Sha-i-t'i (? Shaidi), was accepted as successor, so that presumably Emin died in or about 1918. During the "North (Tartar) and South (Chinese) Dynasties" period (386-580), both the Tungusic Tartar dynasties ruling in the north and the five short-lived Chinese dynasties ruling in the south had occasional relations with the Kokonor State of T'ukuhun or T'uyühun, which was variously known as the khanship, kingdom, principality, etc., of Ho Nan, Pai-lan, Si-p'ing, etc., and whose rulers bore various titles from time to time, such as Jenuye, Khaghan, King, etc. On one occasion (A.D. 428) the Emperor T'ai-wu of the Tartar Wei dynasty defeated the T'ukuhun ruler so badly that he had to fly westwards with his broken army as far as Khoten, which State he broke up, thus finding himself an immediate neighbour of Cashmere (Kipin or Kapiça) to the south. It was in the year 430 that the Indian *S'ramaṇa* Dharmarakṣa brought a number of *Hu* books to Ho Si, or Northern Liang, where the

(incipient) Turkish, but then Hiung-nu ruler Tsugu Mêng-sun gave him a welcome at his court (modern Kan-chou Fu). But all these wars and counter-wars are very confusing without a close study of each "empire's" object; their importance for this query lies in the fact that for 350 years a powerful Tungusic-Tartar State, covering many hundreds, if not at times tens of thousands, of square miles of territory, occupied a key position between rival Turks, Chinese, and Tibetans in the immediate neighbourhood of Kokonor. It had a city-capital of its own, but its own original immigrant population preferred to continue a nomad life, following pastoral supplies, living chiefly on flesh and kumiss, and keeping up the universal Tartar custom of marrying bereaved stepmothers and sisters-in-law. The rulers, even the earliest, were intelligent, "well-educated" men (no doubt in Chinese), and people who had at times immediate contact with Kashgaria and Cashmere. Should it turn out, therefore, that distinguished travellers of the Pelliot-Kozlov type further unearth such literary treasures at or near Karahodjo (Turfan), we shall be in a position to trace local history back along the T'ien Shan North Road, almost year by year, for the past 2,000 years, including the most recent three centuries or more.

But if the Kara-khoto of M. Kozlov really refers to the Shara-koto or Shala-koto lying immediately to the east of "Blue Lake" *Khukhe Noor* (Kokonor), then there is a prospect of an entirely new chapter in Tartar history being disclosed in addition, for a fairly civilized and powerful Tungusic dynasty ruled in the Si-ning and Golok region (which the Chinese Republic is attempting to reorganize as Kan-pien Province) for about 350 years—that is, from the migration (under pressure from the Tartars) of the purely Chinese dynasty and capital of Tsin from China north of the Yangtsze River to what we now call the capital of Nanking, and China south of the Yangtsze River. During these three or four centuries not only was the whole of North China a prey to the conflicting claims of

Tartar and Tibetan "dynasties" along the whole line of the Great Wall from Corea to Turkestan, but a really capable Tungusic dynasty known as Northern Wei, with its offshoots, governed North China from A.D. 386 to 560, when the Turks became in turn the dominant power beyond the Great Wall; whilst China, having driven off Tartars of all kinds, Turks included, became reunited under native Chinese dynasties for over three centuries—*i.e.*, until 908, when Turkish, Cathayan, and Nüchên Emperors ruled North China for over three centuries, until the Mongol conquests. Although the Sui dynasty (581-618) and T'ang dynasty (618-908), both imbued with purely Chinese sentiments, ruled over undivided and even far-extended China, yet the Sui founder had married a Tungusic woman, whose sister married the Duke of T'ang, father of the T'ang founder; hence there was a slight touch of foreign blood and warlike energy in both founders' views, and, besides that, somewhat of a tolerant feeling towards all foreigners. Hitherto, Ta Ts'in (*i.e.*, Great Zin or Syria) had been the only Chinese conception of the Greco-Roman Empire far away, but now news began to filter through of Fu-lin (*i.e.*, *Fereng* or Franks), whose empire the second emperor of the Sui dynasty made desperate but vain attempts to reach. The Western branch of the Turks held the key to the situation, contested, however, by the Arabs, who made their weight felt in both China and Tibet. But our business now is with the Kokonor State of T'ukuhun or T'uyühun, afterwards (according to official Chinese history) erroneously written T'ui-hun. The true explanation of this corruption probably is that the emigrant Tungus of the Mujung family gave his personal name of T'uyühun to the new State he founded around Kokonor, and that in all languages of the Turko-Mongol type the medial *g* or *k* is apt to be slurred over in speech—thus "Moäl" for "Mongol." So far as China knew, the Turkish Empire to their north was founded in 552, but the founder, Istämi, and his brother, Tumen,

had, unknown to the then still divided Chinese, already carried the conquering Turkish arms far west to the Oxus-Jaxartes regions ; and in 558 a Buddhist enthusiast named Djñānagupta had found his way to China (Northern Chou dynasty of Tunguses) by way of Khoten and T'ukuhun. On his return this man visited the Turks, who ordered a number of Chinese Buddhists to accompany the enthusiast and get more books ; after seven years (575-582) these men returned to the Turks with 260 volumes. About now (562), Khosroû Anushirvân of Persia married the daughter of the Turkish Khaghan, "Sinjibu," who announces to the Persian ruler that he will attack the Avars so soon as he shall have disposed of the Ephthalites. Meanwhile, Maniach the Sogdian, working for the silk trade in the Turkish Khaghan's service, and travelling by the North Caspian route, arrives in Byzantium or Constantinople, and reports to the Greco-Roman Emperor that the Avars have escaped in the direction of Europe from the Turks. A few years later Justin II. sends his own envoy Zemarchus (along with Maniach, who was returning) on a mission to the Turks. Tiberius Cæsar sent another mission to the Turks in 576, and the envoy, Valentine, was received by the ruler "Tardu." Here we appear to be on solid ground, for the Chinese often mention Ta-t'ou's setting up a rival Turkish empire in the West, and this Ta-t'ou was the son and nephew respectively of the above-mentioned brethren, Istâmi and Tumen, who, unknown to the distracted Chinese dynasties, had, as we have just stated, already set up an empire in the Oxus-Jaxartes region, at first, however, acknowledging the branch north of China as the Supreme Turkish Khaghan. But Ta-lo-pien, grandson of Tumen, fled to his cousin, Ta-t'ou, in 572, and some think that it was he (the Dalobian of Schuyler, etc.) who received Zemarchus in the Ektag ("White Mountains," the Snowy Mountains of the Chinese). Owing to incessant family squabbles between these Western Turks and their relatives the Eastern or Northern Turks, the division

became definitive about 582, and the permanent policy of the Chinese now was to secure their own safety by setting the two Turkish empires by the ears. It was in 581-582 that the first Sui emperor said in an edict: "When Ta-t'ou attacked our Tsiu-ts'üan (Polo's Succur), Khoten, Persia, and the Ephthalites together revolted against him," and accordingly the emperor continued to support the Supreme Khaghan.

But how does all this affect our subject, the T'ukuhun? Well, in the year 603, Tardu, who in the year 600 had been badly defeated by a Chinese force, had to take refuge with the T'ukuhun, and it is explained further on that, in 605, a mischief-making Chinese envoy told the then friendly reigning Supreme Turkish Khaghan in the East that a Chinese princess had been given in marriage to a related Turkish prince, who had already married and had sons by a T'ukuhun princess, in consequence of which the T'ukuhun had ceased to send tribute to China, and (the envoy said) "The emperor will, therefore, certainly be gratified if you declare war on them." Meanwhile the Sui dynasty itself collapsed for want of regular heirs. In 619 the T'ukuhun broke up the forces of one Li Kwei, King of Liang (Polo's Erguiul), one of the pretenders, in 617, to a new Chinese dynasty; and it is again explained that the reason Ta-t'ou, or Tardu, had taken refuge with the T'ukuhun was that the Sui emperors (nominally 581-618) had always supported the East Turks against the West Turks. In 663 the Tibetans gained a great victory over the T'ukuhun, whose King or Khan Nohopo had to fly to Liang; and, in 670, the Tibetans pursued their conquests to Khoten, Kashgar, Yarkand, etc.

Thus we see that if Shara-Khoto, east of and close to Kokonor, is the ruined city in the desert from which M. Kozlov has unearthed Persian, Arabic, and Hindoo documents, there is every historical reason to show how, through their relations with the early Turks, the little-known T'ukuhun State of Kokonor had good excuse for

hiding away their literary treasures in the "cone-shaped monument" outside their capital city, which they themselves say they had never used for residential purposes.

On the establishment of the powerful Chinese dynasty of T'ang, in 618, the T'ukuhun were at first patronized and encouraged; but, having made several unwarranted attacks upon Chinese territory, and shown little gratitude for being forgiven for past indiscretions, they were at last left to the tender mercies of the Tibetans, who, as we have just shown, proceeded not only to annex their territory, but to aim at Turkestan, and even at part of the West Turk empire. In 670, however, the Chinese, alarmed by rising Tibetan ambitions, sent a large army of 100,000 men to crush Tibet and restore T'ukuhun rule; but this time the Chinese hosts were utterly defeated on the River Boukhain, which flows into the west of Lake Kokonor; and from this time onwards China had quite enough to do to secure her own safety—indeed, one Emperor had to abandon his capital for a few years. T'ukuhun troops are mentioned once more in 764, when a traitor Ouigour Turk, in Chinese employ as Governor of Liang Chou, unsuccessfully led a mixed force of Tibetans and T'ukuhun to attack the Chinese capital; so that evidently the people were not extinct, though no longer independent.

In connection with this obscure subject it may be added that in 1872, when the distinguished general Tso Tsung-t'ang was setting out on his great expedition, over a thousand years later, for a similar re-conquest of Turkestan, he sent a report to the emperor from his headquarters at Si-ning and Ho Chou, distinctly stating that non-Chinese tribes were still in occupation of the region between Si-ning and Kokonor. He actually mentions by name the old historical T'ukuhun capital; but the various Chinese histories and dictionaries do not agree as to how it is pronounced. Fuhan seems the best; but the dictionary of the Emperor K'ang-hi tells us to pronounce it T'ieh-han; foreign translators have Fussū and Pao-han.

HISTORICAL SECTION

THE EMBASSY OF SIR WILLIAM NORRIS, BART., TO AURANGZEBE

BY HARIHAR DAS, B.LITT. (OXON), F.R.HIST.S.

CHAPTER II (*Continued*)

ON December 29, 1698, a formal agreement was made between the Company and Sir William Norris, described as of "Waddon, Co. Surrey," whom the King had at the nomination of the Court of Directors appointed Ambassador to the Great Mogul, and who was to observe the orders of the Court of Directors in all matters of trade. Having accepted the Mission on those terms, the Company agreed to pay him at once £500 to provide himself with clothes, linen, and personal equipage; to give wine and provisions for the voyage to India, and to provide for his table during his stay there, for the journey of himself and his retinue to the Great Mogul's Court and back to the sea coast, and thence to England. They would pay him £2,000 a year from the time of his sailing from England until his return, provided that after his Mission was performed he left India by the first convenient opportunity. Of the first year's salary £500 would be paid at once, and the remainder on his arrival in India; and as a mark of respect the Company presented him with a gold-hilted sword.* Should he die during the Mission, his salary would be paid to the date of his death. The silver plate provided for his use would be returned to the Company on his arrival in England. Sir

* In the William Brown Museum, Liverpool, there is an old sword, in a leather scabbard, with cross-hilt and knob of silver, inscribed: "This sword of State, carried before His Excellency Sir W. Norris of Speake in his Embassy to the Great Mogul, was given as a memorial of his respect to this Corporation, Anno Domini, 1702. John Cocksheath, Mayor."

William's attendants would be paid by the Court of Directors. He was to keep an exact account of his expenses, and also keep a journal of all his "transactions, observations and proceedings" relating to his Mission, and send two copies of it to the Company and their agents.

Detailed instructions were given him by the English Company, of which the following is an abstract :

He was to embark before January 10 on four ships of war bound for the East Indies under the command of Captain Thomas Warren, and was to urge the commander to make all speed on the voyage.

Divine service was to be performed constantly by the Chaplain, Mr. Edward Pagett.

On arrival on the coast of Coromandel he was to proceed to Porto Novo to inform himself of the position of affairs in India, and to publish his arrival and the establishment of the Company, awaiting a few days for the arrival of the Company's ships, the *London* and the *De Grave*. Should the Great Mogul be near that place, he must ask the Government there for assistance in procuring carriage for himself and his retinue and the presents and baggage, obtain a satisfactory interpreter, and prosecute his journey. But should the Great Mogul be near the Kingdom of Golconda, then Sir William must go on to Masulipatam ; if at Agra or Delhi, then he must sail direct to Surat as soon as the season will permit, and proceed to the Court, taking care to inform himself as to the affairs of the old Company and to do what is necessary for the security of trade.

On arriving at any place where the new Company had a factory, he was to consult with its agents there and act accordingly. If he should reach Surat before the Company's ships, he must obtain information as to the customs of the country and try to meet Englishmen who are in the Company's interest and understand the language and will see that he is not misrepresented.

He must make it plain to all the Local Governments that the Company is a new one, and in no way liable for any debts claimed against the old Company.

The valuable presents given him for the Mogul, his son, grandsons, ministers and governors must be distributed according to his judgment.

On arriving at the Mogul's Court he was to demand an audience, deliver the King's letter, and relate the establish-

ment of the new Company, making it clear that it was quite distinct from the old one and therefore not liable for its debts or responsible for its actions. He was to declare also that the old Company's liberty of trade would terminate in September, 1701.

He was to assure the Great Mogul of the Company's honest intentions in their dealings with his subjects and endeavour to obtain *Phirmaunds** confirming all the privileges and freedom from custom and duties which the English nation have hitherto enjoyed, and bestowing new privileges to their advantage. He might give 20,000 rupees to free the English from customs in the Mogul's dominions and what more the Company's President and Council at Surat might advise. If that could not be obtained, he should ask that the English should not pay customs at Broach or any other place, but at Surat only, and then not more than the two per cent. customs ordered by the Great Mogul in 1667; that they should not pay customs in Bengal or upon the coast, nor any on silver, gold, diamonds, pearls, musk, ambergris, bezar or any such fine goods or jewels at Surat or elsewhere; that all goods going in or out of Surat might go directly to and from the English house, and not be put in the custom-house; and that horses and fine goods might not be liable to seizure for the Mogul himself or the princes.

The Company were sending with him Edward Norris as secretary, Thomas Harlewyn and Thomas Thurgood as assistants, and Adiel Mill as accountant. Sir William was to keep a journal with observations on the policy of the Great Mogul's Court; the trade of the country, etc.; also an exact account of expenses. Fair copies were to be made, as agreed above, and sent home yearly with advice of his proceedings.

He was to let the Great Mogul know of the King's displeasure at the pirates haunting those seas; that some found have been put to death; and that he has now sent four ships of war to suppress them, and will in future protect the merchants trading in those seas.

Should the Great Mogul die, the King's letter was to be delivered to his successor; but the Ambassador was to keep out of all disputes as to the succession.

He was to act in all ways for the honour and success of the British nation, and particularly of the Company.

In case of his death the secretary, Edward Norris, would take his place.

* Farman, a mandate.

The old Company, by Dr. Davenant, their agent, would no doubt make negotiations as difficult as possible; but the Mogul was to be warned not to trust him or any of the Old Company's agents.

He was to try to obtain permission for the establishment of mints at Hooghly, Metapollam, or Masulipatam and other places in the Mogul's dominions as the Presidents and Council thought desirable; and to keep up correspondence with their chief factories in India, keeping them informed of his proceedings.

The trade of Bengal being of the greatest consequence to England, he was to try and obtain freedom from all customs there, or at least a confirmation of a former privilege granted to the English to pay no more than 3,000 rupees a year in the whole for the trade in general; to note that the English never paid any customs in the Kingdom of Golconda, which is now in possession of the Great Mogul, and to preserve that freedom.

He was to be as thrifty as possible in conducting the embassy. The accompanying list of his retinue shows a Steward and Master of the Horse, two *valets de chambre*, two pages, two cooks, two butlers, four footmen, seven trumpeters, etc., a bagpiper and a kettledrummer, at a cost of £592 a year.

Names.	Stations.	Salaries.
Mr. William Blackett	Steward & Master of the Horse	£ 40
John Davies	Valletts de Chambrees	20
Mons ^r Arnold		20
W ^m Robberts		20
John Herring	Pages	20
W ^m Falkingham		20
Jeremiah Martin	Cooks	30
Thomas Eltmar		30
John Blenden	Butlers	20
Jonathan Baxter		20
James Clarke	Footmen	12
Richard Francis		12
Edmund Parker		12
Christian Feltman		12
Lewis Scott	Hautboys and Double Courtell: £3 p mon	36
W ^m Shirlock		36
John Cottrell		36
Daniel Hopkins	Trumpeters: £3 p mon	36
Sam ^l Hopkins		36
W ^m Prince		36
Henry Latham	Bagpyper: £3 p mon	36
William Bond	Kettle Drumer: £3 p mon	36

Careful instructions were also given to the principal assistants of the Ambassador. Edward Norris as Secretary was to keep in correspondence with the factories, be secret and frugal, and to make use of all opportunities via Turkey to inform the Company of material occurrences, under cover to Mr. George Vernon and Company, merchants at Aleppo. He was to preserve good order among the retinue, seeing especially that they were not lewd to the women. On arriving in India he was to choose an interpreter, among the suitable ones being named Fleetwood, an Englishman, on the coast of Coromandel, at St. Thomas or near a Venetian named Nicola Manuch,* and at the Bay, Mr. Ravenhill, an Englishman.

They have appointed Mr. Richard Trenchfield to be second at Hooghly; he is to be found on the coast, at or near Fort St. George.

A paper of instructions for the use of the microscopes and telescopes was given to him. The Company wanted an account of the islands touched at beyond the Cape of Good Hope, particularly Madagascar and the best place to settle for the negro trade, Mozambique and the goods most saleable there and what besides negroes might be bought—dyeing woods, gold, gums, elephant's teeth and drugs. Harlewyn, the accountant, and William Blackitt, the steward, also had instructions of their respective duties.

It was added: "The two Crystal branches intended for presents to the Great Mogul are in chests marked N^o 10 and 11 and contain some spare branches, 2 silver frames or rods; they were carried down by Mr. Carye's son, & committed to the care of Capt. Mathews in the *London*; he is to show Mr. Thurgood and Mr. Mill how to put them together, so that they know in case of his death." †

The following is a translation of Aurangzebe's letter which was given to Sir William Norris prior to his departure from India, for delivery to King William III. It is written in Arabic with the Imperial Seal on a long roll, dated January 7, 1702:

* Signor Nicholas Manuch, or Manuchi, a Venetian, who came to India in the time of Shah Jehan. He was originally "attached to the person and fortunes" of the unhappy Prince Dara; and afterwards lived at the Court of Aurangzeb for nearly forty years as a physician. We know of him through the publications of Père Catrou, a French Jesuit.

† British Museum, Additional MS., 31, 302.

"In the Name of God the Rahman, the Merciful. Praise be to God and peace upon His servants whom he has chosen."

Some illegible words wherein one can distinguish God—
 "He has no associate." *At the end in clear script:*
 "Verily God prescribes justice and kindness" (Surah xvi. 92).

THE SEAL.

"Alam-gir Padishah Ghazi Muhammad Muhyi 'I-din Abu'l-Zafar, son of Shahjahan Padishah, son of Jahan-gir Padishah, son of Akbar Padishah, son of Humayun Padishah, son of Babar Padishah, son of Umar Shaikh Shah, son of Sultan Sa'id Shah, son of Sultan Muhammad Shah, son of Miran Shah, son of Sahib Qiran Timur."

"O God, O Thou in whose hand is the Kingdom of the heavens and the earth, and who art the Judge between Thy servants on the Day of Recompense and Parade, we offer the praise bestowed upon Thee by those that swim in the seas of Thy glory, and we sanctify Thee even as Thou art sanctified by those who wander in the rays of Thy beauty; and we testify that there is no god save Thee, with a testimony that shall defy everyone that denies, therein following Thy word: *Say not Three: desist, it will be better for you; truly God is One god* (Surah iv. 169). Further we testify that thy messenger unto us is Mohammed, the Arab, the Illiterate, of Abtah and the Haram, whom Thou didst make the Prince and Gem of the Apostles, concerning whom Thou didst reveal *Mohammed is the Apostle of God, and those that are with him are vehement against the Unbelievers, gentle amongst themselves* (xlviii. 29), who raised the standard of 'Were it not for thee I would not have created these spheres,' and ascended to the stage of 'If thou wert to intercede with us through Mohammed for the duration of the heavens and the earth, we would accept the intercession'; the first of the Prophets to be created and the last to be sent; who trod it (the path of Islam) as an easy path, not crooked nor rough; a religion which has left all adherents of other religions unable to attain its limit. *Now whosoever* (iii. 79) *seeks any other religion than Islam, it shall not be accepted of him, and he in the Last World shall be one of the losers.* Further we testify that his glorious Book is not accessible to falsehood from in front nor from behind, being a revelation from One who is wise, glorious (xli. 42); he kindled the light of guidance,

did not ignorance blind the ignorant; loudly did he summon to the truth, did not error deafen the errant. God be gracious to him, to his family, and his Companions, so long as we are guided by his Book and the Moslems imitate his character."

To proceed: "No figures can give the sum of God's varied favours *were every tree on earth a pen* (xxxi. 26). No reed held by the fingers can render adequate thanks for them, nor can they be recounted by the eloquence of any tongue. The giver of thanks can but confess his inability, if God instruct him in the truth. One such favour is that God has helped us to 'fight in His path,' to suppress the rebellious pagans and their tribes, to destroy what they build, and to undo what they suppose themselves to be doing well. *O ye that believe, fear God, and seek conciliation with Him, and fight in His path, perhaps ye may prosper* (v. 39). We have not ceased raiding their countries, to serve God and not for gain, and searching their dwellings, as God's champions, not as robbers, and despatching troops and hosts marked with the badge of war; believing in God *and what has been revealed unto us, and what was revealed unto Abraham, etc.* (ii. 130). Your messenger reached us when we were on active service, securing the ridges of the hills and the hollows of the valleys against those who disbelieve the Book; overturning the faces of the nearest of them upon the backs of the furthest; causing them to come down in fear from their lofty fortresses, and sweeping them with our swords into the pits of the ravines and the precipices of the hills; seeking thereby the favour of God, inasmuch as 'Paradise is beneath the shadow of the sword.' We showed to him* the respect due to a guest and envoy, and gave him the welcome of a kindly host; until he raised unto us your letter with his right hand, and retired with joy beaming on his brow. We accepted his request with favour and gave him permission to return. Further, we ordered the authorities of the ports, who look after those who come and those who depart, with commands which could not be disobeyed or neglected, to look after him and see that he was properly treated, and now it behoves you to act according to what you have written, and to maintain the character which you have given yourself, and not be one of those who *say what they do not do* (xxvi. 226), *and for the like of this let the agent act* (xxxvii. 59). And we have sent unto thee what will be

* Sir William Norris.

known from the letter in the official despatch. *And unto God is the result of affairs, etc.* (xxii. 42).

"Written on the 7th of Sha'ban, 1113 A.H. = 45 of the accession of the blessed one who has no peer in his sublimity."

NOTES.—The writer of this article is much indebted to Mr. William Foster, C.I.E., who first gave him the reference to this important letter, and to Professor D. S. Margoliouth, who most kindly translated it from a facsimile of the original document.

PORTRAIT OF SIR WILLIAM NORRIS, BART.

THERE is a portrait of Sir William pasted in a large book in the Binns Collection at Liverpool Public Library, and by the side of it is written in pencil "Sir W^m Norres of Speke, engraved by Geikie." As regards the authenticity of the portrait, Mr. Robertson, one of the library staff and a trained expert in his line of work, has done his best to solve the problem. He says that there is not the slightest doubt about the engraving being the work of Geikie, as it is his style and method. He also says that the style of the portrait is similar to Godfrey Kneller's work, the great portrait painter, who was a contemporary of Sir William Norris. The ambassador was at the height of his fame, and would probably have his portrait painted before setting out on his mission. These engravings were presented to the library by Mr. Binns, who during his life collected material for an illustrated "History of Lancashire." How he came by the etching we do not know. It is not inconceivable that he met Geikie, as they were contemporaries. For my own part I do not think there is any reason to doubt that it is Sir William Norris, but of course it wants proving, and up to the present no proof is forthcoming. Strangely enough, there is a portrait of a Mr. Wrow, a reverend gentleman, also engraved by Geikie, in the same collection, which the "Dictionary of National Biography" accepts. If this is right, why should not the other be so? Surely somewhere in the country the original painting exists. It is not in the British Museum, and there is no mention of it in the National Portrait Gallery catalogue.

H. D.

(To be continued.)

LITERARY SECTION

LEADING ARTICLE

THE DRAMA OF ANCIENT INDIA

BY STANLEY RICE

THE discovery of a series of ancient plays which was recently made in the course of research work undertaken under the auspices of the Maharaja of Travancore has caused Sanskrit scholars to revise somewhat their preconceived ideas regarding the drama of ancient India. These plays—or, at any rate, some of them—are confidently attributed to Bhasa, and though the authorship is disputed the verdict is generally favourable; into the details of the controversy, however, there is no need to enter at present, for it is sufficient to note that the internal evidence shows them to have been anterior to “Kalidasa.” Unfortunately, we have, as is nearly always the case in ancient Indian literature, no certain data to guide us in fixing the chronology; but we are positively assured by those who have made it their business to examine that the plays cannot have been composed earlier than the middle of the fourth century A.D. It is customary to speak of India as a very old country. Indians themselves are fond of boasting that their forefathers were far advanced in civilization when the nations of Northern Europe were still little more than savages. Not only had they evolved a system of abstruse philosophy, but they had acquired well-developed social customs, an organized polity, and great art. Compared with modern England and modern Germany this is largely true, but it is as well to remember that even these plays are seven or eight centuries later than the immortal period of ancient Greece, and were not produced until the golden age of Imperial Rome had descended into the twilight of the later Empire. That which gives India her title to be called old is rather that her arts and civilization are still living, when those of the ancient world are but memories of the past. Kalidasa is known to as many Hindus as Shakespeare is to Englishmen. “Sakuntala” and “Vikramorvasi,”

"Malatimadhava" and the "Toy Cart" are still familiar when the country which produced "Agamemnon" and "Œdipus" and "Medea" cannot read them, and does not want to. The exact connection between Greek and Hindu music is not, and probably cannot, be known; but musicians are agreed that the whole framework of the Hindu art is the only key that we now have to the understanding and reconstruction of Greek music, and Hindu music is still instinct with life. It is a marvellous survival, especially in face of the chequered history of India. It proves extraordinary vitality, but at the same time it proves a vitality which has lasted, like the Egyptian mummies, by reason of innate and unexampled conservatism. Left to itself Hindu art tends to be static; exposed to outside influences it becomes slowly modified. Uncontaminated by the West, Indian music has hardly advanced at all since the ancient days; but the influence of Europe has invaded the literature. New forms have been adopted; a new orientation has been given to the old ones, and in the drama Western realism and Western scenic contrivances have profoundly modified the Indian conceptions.

Learned scholars have sought diligently for the origin of what next to her philosophy is, perhaps, the bright particular star of the Indian literary firmament. Some have traced it to the popular mime or Thespian play which was developed from poetic dialogue by assigning parts to the different speakers. A certain colour is lent to this hypothesis by a consideration of rude and primitive dramatic representations to-day. Although the yatra and the kuttu-attam, as performed in Malabar and Travancore, are probably—the first almost certainly—traceable to that period of decadence after the invasion of the Muhammadans had extinguished the light of the classical Sanskrit drama, there seem to be in them vestiges of the old representations before the full development of the Hindu stage, and seeing that these representations take place in the extreme south, where the influence of Islam was never great, it is not unlikely that, in view of the intense conservatism of India, they are in fact a survival of the primitive. The special features common to all kinds of performances are the conventional costumes and the subordination of the spoken word to gesture and to the dance. The King wears a crown of peacock's feathers, and his entrance is announced by a single note on the conch, after the manner of a Shakespearean flourish; ascetics are dressed in red in lieu of the uncompromising bark, and it would seem that the per-

formers were originally only men, but this is not certain. India evidently passed through a transition stage; female parts were originally taken by women, though clearly their morality was of the loosest, since the male actor was sometimes known by a name which signifies "he who shares his wife with others"; in all probability it was the example of the Mussalmans, together with the practice of a more austere religion which drove women temporarily from the stage to the seclusion of the zenana. The modern movement towards the greater emancipation of women has not been without its effect on the stage, though in some of these primitive plays women are still barred; this is chiefly due to the religious character of the plays, and the practice is paralleled in our Christian churches, where the choir is monopolized by boys and men with the sanction of public opinion. Secondly, the plays do not pretend to literary excellence. We are assured that everything depends upon gesture, which has been reduced to a fine art, so that the spectator can gather from the conventional symbol whether it is the sun which is being represented or a lion, an arch or a garland. The spoken word is, in fact, used rather as explanatory notes, somewhat as we use to-day the legends on a film screen.

There are therefore materials upon which to build the theory that the origin of the drama was the popular mime assisted by the epic, for it is the stories of the great epics (and especially the Ramayana), supplemented by the Puranas and by the Krishna legends which had their rise in the Bhakti stage of religious thought, that are being enacted to-day. But Professor Berriedale Keith, in his exhaustive study, "*The Sanskrit Drama*" (Oxford), considers that the evidence in favour of a religious origin is overwhelming, and most students, unless they be ingenious Germans, will be inclined to agree with him. Nor are the popular plays just described inconsistent with this theory. They are usually performed in temples, though latterly there has been an extension to weddings and other domestic festivities. In some cases the actors are exclusively of the Brahman caste, and the female parts must be taken by men. This certainly implies that the drama, like the Greek tragedy, is based upon religion, and the introduction of music and the dance undoubtedly strengthens the theory, since music is said to have been invented in heaven, and the famous Tandava dance is the creation of Siva and is his gift to mortals.

It is, however, a far cry from the early origins of the

drama to the finished product of Bhasa, which, with the fragments of Aswaghosa, also recently discovered, are the earliest extant examples. Aswaghosa introduces the Buddhist element into the drama, and it is perhaps worthy of remark that the *Nagananda*, the work of Harsha, founded upon a Buddhist legend and eminently Buddhist in the resolve of the hero to give his own life for those of the serpents sacrificed to Garuda, is still one of the favourite plays in the repertoire of the popular players of Travancore and Tinnevely. Buddhism, in fact, though overcome as a religion, remains enshrined in literature and is the inspiration for many of the fables and stories of the *Panchatantra*. Here, too, we are introduced to the allegorical drama which to some extent has been followed in a form altered to suit modern taste in Rabindranath Tagore's "*Chitra*." More interesting, however, because more complete, are the plays of Bhasa; to the student the discovery is important because we have the "*Charudatta*" on which the more famous "*Toy Cart*" was founded, thus suggesting that the author of the latter borrowed his plot or that both he and his predecessor took it from a still older source. We know neither the name or the author of this celebrated play nor his date. Most scholars are agreed that Sudraka, who purports to be the royal author, is some form of pseudonym, and it was pointed out about a century ago that the attribution of a play to some royal personage was not unknown. Professor Wilson cites the instance of the "*Ratnavali*," ascribed to Harsha, "unquestionably," according to Professor Keith, "the king of Stanviswara and Kanyakubja, who reigned from about A.D. 606 to 648." There is a disinclination to credit the king himself with the so-called Harsha plays, and the theory is advanced either that he wrote them with assistance or has lent his name to an unknown author. The "*Toy Cart*," however, whether by Sudraka or no, had hitherto been accepted as our oldest extant play; this theory is, of course, destroyed by the discovery of Bhasa and of Aswaghosa, but modern scholarship goes further and is inclined to relegate it to a date later even than Kalidasa.

The "*Toy Cart*," whatever be its date, is one of the most perfect of all the extant dramas. Inferior to the "*Sakuntala*" in poetic beauty, to the modern mind it excels it in human interest, for it does not belong to the highest type of the drama wherein gods, kings and heroes play their part and the tangled knot of the story is cut by some supernatural intervention. It is the tale of a plain

merchant's love for Vasantasena, a courtesan. She has, however, taken the fancy of the worthless Samstanaka, the king's brother-in-law, who, being repulsed, attacks the girl and leaves her for dead. He then denounces the merchant as the murderer, and the evidence, such as there is, seems to confirm his story. The merchant is sentenced to death, but at the last moment the supposed corpse appears on the scene. Vasantasena is not dead and Samstanaka's plot recoils upon himself. In the nick of time the truth is discovered, and the real culprit being now in danger of his life implores the merchant to spare him. The whole plot is complicated by a sub-plot of a political revolution which critics think is historical in origin. The Raja is deposed. The usurper, who is under obligation to the lovers, raises the merchant to a great position; Samstanaka's life is spared at the intercession of the man he has wronged, and Vasantasena being made free of her profession becomes the lawful wife of her lover.

Such in bald outline is the story, and it is worth telling because the "Toy Cat" exhibits so many features peculiar to the Sanskrit drama that it is almost an epitome of it. It is characteristic of all the ancient plays that they should end happily, because it was a canon of the art that the audience must not be shocked and must leave the theatre in a calm and contented frame of mind. There is no such thing as tragedy. It has been remarked more than once that the struggle of a man against the power of Destiny, the idea which was so prominent to the Greek tragedians, was altogether absent from the Sanskrit stage. The high comedy which it has preferred sometimes leads up to such a tragic situation that only the expedient of raising the dead or the intervention of the gods in some miraculous fashion will suffice to restore matters, as in the "Sakuntala," where the king is transported to heaven to become united to his lost bride. Death and horror are banished from the stage.

The "Toy Cart" further illustrates three of the characters which constantly figure in these plays. It belongs to the type of play called *Prakarana*, the plot of which should, according to theory, be the invention of the author; its chief characteristic is that it ought to deal with affairs of everyday life, and the hero and heroine should belong to some class below the rank of royalty, a merchant or a Brahman for the hero, a lady of good family or a courtesan for the heroine. It is the occurrence of the courtesan, who, nevertheless, in the "Toy Cart," is repre-

sented as a woman of excellent virtue whose misfortune rather than fault it is to have embraced a despised profession, that among other indications has led German critics to suspect the influence of the Greek New Comedy, a theory which M. Sylvain Lévi, until the appearance of Professor Keith's new book the acknowledged European authority, has strenuously opposed. And this appearance of the hetæra is fortified by the introduction of the Vita, who, it is argued, is closely analogous to the parasite of the Greek New Comedy. He is a boon companion, conversant with the elegances of life and not a little pluming himself upon his culture with which he combines a certain amount of affectation. Not a rogue himself, he panders to the rogueries of the bad company which he keeps and on which he battens. He is, however, neither so constant a factor nor so characteristic of the Sanskrit drama as the Vidushaka, who is loosely and somewhat incorrectly called the buffoon or the fool. He is, however, not the professional fool of "Twelfth Night" or "King Lear," nor is he the typical fool of broad farce. If we must seek for an analogy, the nearest is perhaps Falstaff, for he is always a Brahman—a man of high caste, and should be ugly and misshapen. His buffooneries are largely concerned with the pleasures of the table, as in the "*Svapna-vasavadatta*" of Bhasa, where on his first entrance he talks of "dainty, delicious confections," or in the "*Toy Cart*," where he waxes enthusiastic over the smell of the kitchen. This appears to be the stock joke which presumably took the fancy of bygone audiences, but for the rest the Vidushaka is usually the common-sense, matter-of-fact foil to the sentimental and lovesick king or hero. It is he to whom the king turns in his difficulties, and it is he who suggests various devices by which the king may obtain his desires. If sometimes his schemes miscarry, that is because events have taken some unforeseen turn. So characteristic is he to Indian drama that he has been introduced into the popular plays of Travancore, where, however, he is rather an auxiliary than an integral part of the play. For to the common folk the language of the old dramas is unintelligible. Sanskrit is not a dead tongue as are the tongues of ancient Greece and Rome, but it is confined to the learned and the higher castes, so that an interpreter is needed if the play is to be understood. It is this rôle that the modern Vidushaka fills. It is his function to translate, for it is characteristic of India that the ancient Sanskrit plays, even including the "*Svapna-vasavadatta*," are among the most popular with the unlettered audience.

The ancient Indian drama is still a part of the people's life—a part that perhaps shares with music their most reverent and their deepest affection. We are fond of applauding the material benefits of British rule—our posts and our telegraphs, our railways and irrigation, our law courts and our police system. It is folly, because it is so one-sided, to deride or to belittle these achievements, for a ride is hardly a pleasure when black care sits behind the horseman. That the crops shall grow, that everyone shall have work to do, that food shall be abundant and transport easy—these are all things without which life would be intolerable. But if we would really understand India, would think with her thoughts and enter into her feelings, we must not be satisfied with these material comforts and conveniences. And the way to her heart is through her drama and her music. Hindu India has set but little store by her sculpture and her architecture and her painting. Ancient glories have been ruthlessly destroyed either in the name of an iconoclastic religion or to build a new temple or a new house. The Taj Mahal and all that it stands for are the contributions of a foreign race, and to the Hindu must have been as the Norman castles were to our Saxon forefathers—things to admire, perhaps to reverence, but not to love. It has remained for another alien race that has contributed nothing to Indian architecture to rescue India's treasures from desecrating hands.

But the essence of the drama is its poetry. We need not look for realism, for that to the writers seemed a small matter. The plots are good enough, but are too artificial for modern taste, and the everlasting attraction of the epics has tended—those at any rate of the "Natakas"—to outworn themes, and to reduce the living character of the heroes to something wooden and stereotyped. That is, however, particularly true of the later drama when Musalman influence, but more especially that affectation of culture which prides itself upon abstruse language, long words and ingenious metres, had begun to dim the earlier lustre of Kalidasa, of Bhasa, of the "Toy Cart," and even of Bavabhuti.

It is surely significant that for many years after the English were established in India the very existence of this art was unsuspected. Clive knew it not, nor Hastings; through all that stormy period before and after Plassey Hindu villages and Hindu society were seeing and enjoying the special glory of their land unknown to the foreign conqueror. The story of its discovery is not so well known

that it will not bear retelling. Always attracted by Oriental study, Sir William Jones had found in some curious old books by Jesuit missionaries in China the mention of a mysterious kind of Sanskrit literature called Nátaks. No European could tell him what they were, and even Brahmans could get no nearer to an intelligible explanation than that they were discourses on dancing, music and poetry, or conversations before ancient Rajas. But at last someone was found who put him on to the right track by explaining that these Nátaks were exactly like the "plays" which Calcutta society used to witness in the cold weather. Thus was his zealous curiosity rewarded, and thus was revealed to astonished Europe the existence of dramas which were being enacted all the time under its indifferent nose. From that time onwards savants—especially French and German—have been busy analyzing, dissecting, translating, advancing theories and refuting them; but to the world at large these plays have remained as unknown as Kham-murabi. Perhaps a day may yet come when "Sakuntalá" will be as familiar to us as "Antigone," and "Charudatta" as "Agamemnon." There are signs of awakening interest, but Europe, presented with a talent, has hidden it in a napkin, and for the present is content to leave it there.

OUR REVIEW OF BOOKS

NEAR EAST

THE NATIONS OF TO-DAY: THE BALTIC AND CAUCASUS STATES.
(*Hodder and Sloughton.*)

(*Reviewed by* PROF. Z. AVALOFF, *member of the Georgian Delegation to the Paris Peace Conference.*)

To give—on some eighty pages—a review of the history of the Caucasus, especially of Georgia, from the most remote time to the present-day Caucasian States (the Republics of Georgia and Azerbaidjan) is no easy task. Yet such is the achievement of Mr. W. E. D. Allen in his part of the volume, "The Baltic and Caucasian States," in John Buchan's series "The Nations of To-day"—a new History of the World.

The author starts, in his introduction, with a sketch of the historical importance of the Caucasus Range, "the strategic focus of the struggle between the settled folks of Southern Asia and the nomads of the northern plain." This range being linked (by the Suram Mountains) with the Armenian Plateau, "the subject of perennial conflict between the rulers of Asia Minor and of Persia," the very uncomfortable position of the Transcaucasian peoples between the struggling Empires appears quite clearly. To quote Mr. Allen: "Rome and Parthia, Byzantium and Persia,

Byzantium and the Eastern Khalifat, Seljuk and Mongol, Osmanli and Persian, have in turn fought for the control and have wasted their manhood and their wealth in the struggle. In all these wars the valleys of the Rion and the Kur have constituted a route by which the Western and Eastern combatants have endeavoured alternately to outflank the other" (p. 171). From this viewpoint "Armenian and Georgian history is mainly a record of treachery, violence and cruelty . . . both races were involved in a struggle in which they had no interest, and in which each combatant came as an invader."

Such is the general—and very misanthropic—preliminary conclusion of the author.

Then follows a condensed historical survey divided in two sections, the first one dealing with "Georgia and the Caucasus," the second, with the Caucasian Azerbaidjan. The author locates all the phases of their destinies in the frame of the general history of the Near East and the Middle Asia, displaying a very extensive knowledge of all the numerous and varied sources, accessible to him, relating to different parts of Caucasia and especially to Georgia. In the vivid and very interesting narration we are given all the chief features of the historical, ethnical and cultural foundations and surroundings of the Caucasian evolution. Very much attention is reserved to the old travellers—for instance, to Chardin's "*Voyage en Perse*," the two first volumes of which dwell mostly on Mingrelia and other parts of Georgia, and contain much valuable information about this country in the second half of the seventeenth century. The chief fault of Chardin is that, true as his relation may be when dealing with the moral decadence of the Georgians, he does not even mention such important and more comforting things as, for instance, the literary revival of the seventeenth century (Mr. Allen mentions it in the beginning of the eighteenth).

Generally speaking, the distribution of shadow and of light in the picture Mr. Allen gives of Georgia is probably adequate. But if the shadows are so dark, the light was in reality perhaps stronger. Historically, the value of the Georgian architecture or of the Georgian literature is very much greater than would appear in the book of Mr. Allen. The importance of the mediæval buildings of Armenia and Georgia, its influence on the early Russian art in the North, its true place in the history of art of the Christian East—all these questions have been discussed, if not answered, by the specialists (Grimm, Kondakov, Diehl, Strzygowsky, etc.), and the cultural value of the Georgian contribution is being more appreciated than before.

As to the literature, its variety, antiquity and importance in the history of the Georgian people could be outlined with more stress. Mr. Allen overestimates the literary rôle of Georgian monasteries in the last centuries (as he over-estimates the work "of the small colonies of Italian Capuchin Monks"), but he does not even mention the truly remarkable mediæval Georgian church buildings and monasteries in Byzantium, Palestine, Syria, Sinai—monuments of deep faith and shelters of learned Christianity.

That at the same time Georgia had produced a poetical literature free of confessional narrowness was a testimony to a certainly cultural state of mind.

Notwithstanding these few remarks, it must be stated that the development historically leading Georgia and the Caucasus, after the brilliant period of the Georgian monarchy of Bagratides (eleventh to thirteenth century), gradually towards the incorporation (in the beginning of the nineteenth century) into the Russian Empire, is presented by Mr. Allen very vividly, with excellent documentation and without losing anything of the pathetic fatality of the events.

The recent history—after the Great War—the instalment of independent Republics in Georgia and Azerbaidjan (1918), the British occupation in 1919-1920, the *de facto* recognition by the (then) allied Great Powers, early in 1920, the *de jure* recognition of Georgia early in 1921, the Bolshevik invasion and the reintegration into the Soviet Empire, first of Azerbaidjan (May, 1920), and finally of Georgia (March, 1921), is based by Mr. Allen on reliable documents, and is probably the best published short review of these events.

"Such a consummation in the Caucasus was, perhaps"—so concludes the author—"inevitable. For the history of the last four years has demonstrated the political instability and military weakness of the National States. And, from the standpoint of Russian Imperial policy, the re-establishment of control over the Caucasus was a strategic and economic necessity" (p. 222). Following generally, in his political judgment, the Russian Imperial standpoint, Mr. Allen adds: "Thus, for reasons political, economic, and moral, it is unquestionable that the future of the Transcaucasian peoples must lie in intimate union with Russia."

Unfortunately, the history of the last years has demonstrated also "the political instability and military weakness" of some great empires. And it was precisely the collapse of such an empire which resulted in the "separatist movement of the border races." And it is not impossible that the future historian will find the creation, for instance, of the national Baltic and Caucasian States, in the turmoil of war and revolution, as one of healthy and statesmanlike, if secondary, deeds in the general dissolution of Russia.

Control over the Caucasus; a strategic necessity for a Russian Empire? Certainly; for an aggressive Russian Empire, with Persia and Asia Minor as eventual "subjects of conflicts." Moral reasons? Christianity was a reason in the past owing to the attitude of Georgians and Armenians towards Russia. The importance of this tie is now not so great; but does Christianity or the different other existing cultural ties necessarily imply a complete political incorporation? And what may be the "moral foundation" of the Russian rule in Azerbaidjan and Daghestan?

Communism is certainly nowadays such a bond; but, firstly, its aim is not Russian, or "All-Russian," but international; secondly, are they numerous—these "religious" communists, in Russia and in the Caucasus?

One economic reason is of great moment—the Baku oil. Because Russia wants the Baku oil they must *own* Azerbaidjan (with the Azerbaid-

jans); and because, to export the Baku oil abroad, Russia wants the Baku-Batoum pipe-line, they must own Georgia as well.

This is the political philosophy of many educated Russians of the "Holy Russia." It would be for them, perhaps, better could they be more businesslike in practical life and less in political philosophy.

As a matter of fact, the only bond uniting now the Caucasian States with Russia is the well-organized dictatorship of the Communist party. What the future development of Caucasian peoples may be in this connection it would be idle to prophesy, as nobody knows what the future of Communist Russia and of Communism in the world will be.

The future is never unquestionable. But unquestionable it is that if, in 1919-1921, "this formidable range of Caucasus" did not become the natural frontier of the Soviet Empire in the south, this occurred only because the Caucasian Republics failed to create the necessary union, and perhaps still more because the Great Powers failed to aid them in creating such a union, which was quite within the political possibilities in 1919-1920. Why there was no such a thing as an efficient "allied" policy in Caucasia. Why the British policy, as represented by Lord Curzon and favourable to independence of Caucasian republics, proved unsuccessful, and why the Lloyd-Georgian policy, favourable to reincorporation of Transcaucasia into the Soviet Russia, has prevailed—to throw a full light on all these questions remains a task for the perspicacity of a future historian.

The Soviet policy in the Caucasus in 1919-1921 was, at any rate, clever and firm (a great disadvantage of their adversaries, small and great!), and so it happened that, after having met on their European frontier—from the land to the Black Sea—an *on ne passe pas*, the Soviet troops re-entered—instead of Warsaw, Berlin, etc.—Tiflis (February, 1921), a result somewhat ridiculous from the Russian Imperial standpoint (very dear to Mr. Allen), but still a great success for the Moscow Soviet Government. It must be added that the renovation of the "intimate union" between Russia and the Caucasians in the form of the Union of the S.S. Republics (1923-1924), including a Transcaucasian Federation, composed of Georgia, Armenia, and Azerbaidjan (so entering into the Union on the principle of Imperial partnership), is certainly, formally speaking, the most sound, large, and fruitful political scheme ever drafted for the Russian Empire! At any rate it gives a *coup de grâce* to the old Russian narrow-minded and antiquated conceptions of a centralized indivisible Russia, still prevailing in Russian anti-Soviet politics, even during and after the Revolution of 1917.

That this sound scheme is radically vitiated by the political tyranny and economic extravagancy inherent to the Soviet system is quite another matter, not to be dealt with here. But even from the purely political viewpoint the restored Russian Empire looks rather feeble.

What has happened to "Russian Imperial idea" in the Europe after the War and the last Treaties everybody knows. But is it not curious that Soviet Russia was obliged to give back to Turkey Kars and Ardahan, places of the greatest importance, precisely for "Imperial defence"? Even where Russia was decidedly victorious in 1914-1918 the Soviet empire was unable to maintain, not to mention the new acquisitions, even the boundary

of 1878-1914! And these facts present, perhaps, the opportunity to revise some ideas of Mr. Allen with regard to the destinies of Georgia and Armenia in the history of the world. The author deplores their participation in the past millennia in the wars of the old conquerors in which they have not been interested; he deplores their ruin, misfortunes, etc. But did not, for instance, the Armenian race take part lately in a great war they were interested in, and on the side not of the bygone Oriental tyrants, but of what is styled as Occidental democracies and the most prosperous Commonwealths of the world? And what was the result of this participation? Has ever Armenia seen more ruins and blood than in 1914-1924? The Armenians in Turkey will perhaps invoke soon, they are already invoking the days of Abdul Hamid as the Paradise lost!

The fate of the Georgians is better. And what they deplore is, probably, their short-lived independence of 1918-1921. But all the three republics, Georgia, Armenia, Azerbaidjan—three races, three tongues, three confessions, three states—are now politically resuscitated and awakened to a new life on modern lines; this may be unquestionable. And *faute de mieux* they will perhaps consider their "intimate union" with Russia as the next best solution as long as it lasts. The "formidable range" of the Caucasus will probably last, and the peoples living in its shadow, between the two seas, will still be there when the centuries pass. In 1917-1918 it was not the first time, and not the last, that they witnessed an Imperial collapse.

The chief economic resources of Caucasia are described substantially in the second part of Mr. Allen's work. The very interesting chronological tables contain much historical data in addition to the text, and three maps are there to guide the reader of the book, unquestionably a valuable contribution to the literature on Caucasus.*

INDIA

WONDERS OF THE HIMALAYA. By Sir Francis Younghusband. (*Murray.*)
(Reviewed by Sir THOMAS HOLDICH)

Amongst the many stirring adventures on our Indian frontier, and beyond it, which have made Sir Francis Younghusband's name for ever famous amongst travellers and geographers, perhaps that early exploit in his career when he crossed the gigantic Muztagh range by a pass which had long ceased to bear any resemblance to a pass is the one which will hold the longest record; and it is this which rightly occupies the chief place in his book. It was in the days when, knowing little or nothing of the rugged barrier of the Himalaya, men's minds in India were constantly turned to the danger of Russian penetration into that mountain wilderness such

* The bibliography given by the author is extensive and useful. The works of the new school of scientific research in Caucasian problems, headed by Professor Marr, are not mentioned. Also omitted are such standard works as, for instance, Butkow's "Materials for the Modern History of Caucasus" (three vols.) or G. Shlumberger's "L'épopée Byzantine" (three vols.), containing in popular form much information about Georgia and Armenia in their connection with Byzantium.

as might be sufficient to stir up political trouble against us. In simple but picturesque language Sir Francis narrates the tale of that extraordinary exploit. On his side were youth, courage, ambition, and deadly earnestness; and beyond all this we can trace much of the spiritual energy which has been the motive power of so many great missionaries and travellers, which not only puts them in direct communion with the marvels of nature above and around them, but promotes a bond of sympathy with all humanity no matter how far remote from the superficialities of civilization. From butterflies to high priests all were matters of intense interest to Sir Francis. That is the true spirit of the heaven-made explorer, who differs from the casual traveller, or globe trotter, as the angel Gabriel differs from a messenger boy. Possibly his love for the human subject of his contemplation occasionally leads Sir Francis to read a little too much into the soul of his subject, as, for instance, where he could see nothing but a flight of ecstatic reverence and artistic yearning in the music evolved from an instrument "more or less resembling a violin" by a remote and solitary native telegraph clerk hidden away in the Himalayan wilds. Needless to say that Sir Francis was as loyal and devoted to his small but mixed staff of Baltis, Chinese, and Andijanis as they were to him, and he was most faithfully served. But for the admirable Wali (his guide) it is doubtful whether that acrobatic feat of descent from the Muztagh ridge could ever have been accomplished, for they were all of them guiltless of the science of mountaineering, and their equipment was of the crudest. There is a subtle touch of humour in the tale of their welcome when they reached home after the accomplishment of this great enterprise. The faithful Wali would have been murdered by his relatives for discovering a new way by which they might be raided, and Sir Francis himself received from his brother subalterns in the K.D.G.'s exactly that welcome which might be expected from young officers who had been doing his regimental work for him during his absence for 20 months! The story of the Muztagh crossing is but part of a most delightful book. The same spirit of love of nature, and love of what many of us would consider most unattractive men, pervades it to the end, and teaches a great moral. Singing psalms in his heart Sir Francis tackles the roughest and rockiest obstacles and welcomes them. He is moreover gifted with the beautiful art of word painting, so that for one that knows the Himalaya one feels grateful to him for recalling to one's memory certain brief periods of almost uncontrollable ecstasy when facing the stupendous grandeur or the amazing beauty of Himalayan scenery.

ANCIENT INDIAN FABLES AND STORIES: Being a selection from the Panchatantra. By Stanley Rice, late Indian Civil Service. (London: John Murray.) 1924. 3s. 6d. net.

(Reviewed by DR. MORRISON)

It was a happy idea to include in the "Wisdom of the East" series some specimens of a characteristic Indian form of conveying moral instruction by means of beast-fables and apologues. The best-known of

this kind is, without doubt, the collection entitled "The Panchatantra; or, The Five Books." Its vogue in the East is proved by the number of translations from some form of the Sanskrit original made into various Eastern languages, and into certain European tongues. Curiously enough there does not seem to exist any translation into English. The thanks of the reading public are due, therefore, to the translator of these selections, which will give some notion of the spirit of the original. Mr. Rice's English style is smooth, idiomatic and lively, and can be read with pleasure. We could wish that he had indicated the edition of the text which he follows, and that he or his printers had not allowed many strange forms of proper names to pass without correction, as—e.g., on page 18—*Sati* for *Sakti*, or, on page 62, *titiba* for *titibha*.

On the whole the book will serve a good purpose and will interest students of folk-lore and literature. The prince of all fabulists, Lafontaine, owes much to this ancient collection, which he, of course, could know only at second or third hand.

FRENCH BOOKS

LES RACES DU HAUT-TONKIN-DE PHONG-THO À LANG-SON. By Maurice Abadie, with a preface by Paul Pelliot. With map and 44 illustrations. (*Société d'Éditions Géographiques*, 17, Rue Jacob, Paris.) 30 francs.

Although the customs of the peoples of Upper Tonkin have been the subject of much study and writing, this is the first occasion that readers are offered a compact, illustrated volume entirely devoted to them. The fact that Upper Tonkin is removed from the general stream of traffic has enabled its inhabitants to preserve more than elsewhere their ancient rites, the description of which should interest all lovers of folklore. The author has set out to prove that the people of Upper Tonkin are not "vulgar barbarians, as the Chinese would have us believe." Although this sounds like propaganda, he has written a very readable and informative book.

DANS L'ASIE QUI S'ÉVEILLE. By François de Tesson. (*Renaissance du Livre*, 78, Boulevard Saint Michel, Paris.) 10 francs.

This volume does not, as the title might suggest, deal with the awakening of Asia in the political sphere. It is, on the contrary, an account of travels in Indo-China, with an eye to the beauty of the scenery and the charm of its inhabitants.

Perhaps the most entertaining chapter is that devoted to the women of Annam. They are described as remarkable—even in the East—for their love of jewellery and education. They crowd into the State schools, and have a predilection for literary studies. In the words of a headmistress at Saïgon: "We are doing our best to make them love France, and value our education. The more we educate, the better for the propagation of

our ideas. And they all marry well. Their husbands find new reasons for appreciating French culture."

BOOKS RECEIVED

- WARDROP, A. E., Major-General: *Days and Nights with Indian Big Game*. Illustrated. 1923. (Macmillan.) 12s. 6d.
- JACKSON, Sir T. G.: *Memoirs of Travel*. (Cambridge University Press.)
- PARIS, JOHN: *Sayonara*. (Collins.) 7s. 6d.
- SEN, DINESCHANDRA: *Eastern Bengal Ballads*. Vol. I., Part I. (Mymensing, Calcutta University.) 1923.
- BABU BHAGAVAN DAS: *The Science of the Emotions*. (Theosophical Publishing House.) Rs. 5.
- MACDONELL, A. A.: *Classical Sanskrit Dictionary, with Transliteration, Accentuation, and Etymological Analysis throughout*. A re-issue corrected. 1924. 42s.
- OLMSTEAD, A. T.: *History of Assyria*. With Plates. 1923. (Scribner.) 30s.
- BEER, G. L.: *African Questions at the Paris Peace Conference, with papers on Egypt, Mesopotamia, and the Colonial Settlement*. Edited, with additional notes, by L. H. Gray. (Macmillan.) 28s.
- GUPTA, V. A.: *Hindu Holidays and Ceremonials, with Dissertations on Origin, Folk-Lore, and Symbols*. With plates. (Thacker, Calcutta.) Rs. 8.
- MILBURN, R. G.: *The Religious Mysticism of the Upanishads*. 1924. 3s. 6d.
- LEWIS, A. B.: *Block Prints from India for Textiles*. Twenty-four plates. 1924. (Chicago: Field Museum.)
- WILLIAMS, E. T.: *China: Yesterday and To-day*. Illustrated. (Harrap.) 15s.
- ANNUAL REPORT, Archaeological Survey of India, 1920-21.
- MEMOIRS: Archaeological Survey of India, No. 14. *Antiquities of Bhimbar and Rajauri*.
- RECORDS: Geological Survey of India, Vol. LIV., Part III. *Indian Tertiary Gastropoda, etc.*

THE LEAGUE OF NATIONS: ITS SOCIAL AND HUMANITARIAN WORK IN THE NEAR AND FAR EAST

BY F. R. SCATCHERD

I. THE LEAGUE'S NEW SCOPE*

THE League, established at the outset for the preservation of peace, was also designed as an instrument for the furthering of that international co-operation without which world progress is impossible.

The adoption by one State of measures essential to achieve certain ends may be rendered abortive through lack of a similar policy on the part of its neighbours.

The social and humanitarian activities of the League have necessitated the creation of permanent organizations—*e.g.*, the Opium Committee and the Committee on the Traffic in Women and Children—or provisional organizations such as the High Commissariats for Prisoners of War and Refugees. In all such organizations no predetermined lines are followed, each organization being adapted to special ends.

II. EPIDEMIC DISEASE AND PORT HEALTH ORGANIZATION IN THE FAR EAST†

Dr. Norman White's valuable and painstaking report cannot be adequately dealt with in a cursory review. It runs into nearly two hundred closely-printed foolscap pages, bristling with facts valuable for the understanding and solution of the problems dealt with. Despite its technical nature, its lucidity of style renders it interesting reading even for the layman, and will cause all friends of the League to redouble their efforts in support of such beneficent and world-wide activities. The point of real interest is that the Health Committee has decided definitely on the setting up of an epidemiological centre at Singapore, and that New Zealand and Australia have accepted that decision.

Although the time allotted to the Indian part of Dr. White's tour was deplorably inadequate, and Rangoon, Calcutta, Simla, and Bombay were the only parts visited, his intimate knowledge of Indian health questions in general renders his report of special interest to readers of the ASIATIC REVIEW.

III. "SYMBIOSIS IN CAUSATION OF PNEUMONIC PLAGUE EPIDEMICS"

The above heading on p. 13 of Dr. Norman White's report calls for more than a passing remark, since it involves a mixing up of two conflicting principles—namely, those of symbiosis and parasitism.

* "Social and Humanitarian Work." 3d. League of Nations Secretariat, Geneva.

† "The Prevalence of Epidemic Disease and Port Health in the Far East." Report by Dr. F. Norman White, Geneva.

Dr. Norman White is of opinion that the plague bacillus *alone* does not, and cannot, cause widespread epidemics of pneumonic plague, that there is an additional organism at work, which, as he states, is "in symbiosis" with the plague bacillus. This is an example of the way in which biologists and medical writers misconceive the vital principle of symbiosis.

The case probably stands thus: one parasite abets another, more or less casually and as a fellow-member, in a vicious circle of depredation—the very opposite of a symbiotic circle. The plague bacillus is no doubt too weak and degraded, as a result of its parasitic habits, to work great havoc by itself. But if other parasites have previously poisoned and weakened the system so as to lower resistance sufficiently, the plague bacillus gets its chance.

From the writings of Mr. Reinheimer and his school we have learned that symbiosis or life-partnership is connected with wholesome activities—such, in fact, as make normal, healthy, and progressive life possible on this planet.

The definition of symbiosis as "conjoint life" (be the results of the association good or evil) promulgated by a few parasitologists is unphilosophical and misleading. It identifies the symbiotic with the parasitic relation, which is as unscientific as identifying health with disease.

A true symbiosis is a relationship of wide avail, of direct usefulness to life in general, so much so that it may justly be called the fundamental moral relation of organism to organism.

How can a parasite with its nefarious life and injurious relation to other organisms compare at all with a truly symbiotic organism since it typifies the very opposite principle, that of evil? To a parasitic organism good is evil and evil is good, and a sane biology must exercise a just discrimination between the two principles. By their fruits shall ye know them.

Vast numbers of non-pathogenic organisms, living in the intestines—such, for instance, as the ubiquitous *Bacillus coli*—can, by injudicious feeding on the part of their human host, be turned from symbions and helpers into parasites and poison-producing enemies. By their toxins these perverted helpers prepare the ground for worse organisms. It is well known that the anaerobic bacteria, a highly toxic group, to which oxygen is a poison, can work their harm all the more efficiently if certain aerobic or oxygen-using organisms have prepared the soil for them.

Symbiosis cannot be made responsible for the doings of organisms which, however incipiently, have become divorced from its underlying principles.

Orthodox science, recognizing mainly the form side of things, cannot deal adequately with symbiosis. To do so it must, like the author of "Symbiosis,"* take account of principles. It must observe the beginnings of disease. It must make a study of those early departures from health by which it will learn that parasitism goes much farther back than is generally believed—to depredation in fact.

* *Asiatic Review*, October, 1923; January and April, 1924. League of Nations articles by F. R. Scatcherd.

If the toxins of a perverted helper, turned parasite, prepare the ground for worse parasites, the principle of symbiosis is not thereby involved. On the contrary, the whole mischief has arisen because in the first place the principle of symbiosis (involving restraint in feeding) has been violated, and parasitism has been put in its place.

I have dealt thus at length with this misuse of the term symbiosis because its rightful understanding forms the sole *scientific* support for those moral foundation principles vital to the very existence and success of the League of Nations. It is also essential to a better conception than we have had hitherto of the problems of disease in general.

IV. THE LEAGUE AND REFUGEES OF ASIA MINOR

On the defeat and retreat of the Greek Army in 1922, the Third Assembly, then in session, put at the disposal of Dr. Nansen, for the help of the Armenian, Greek, and Turkish refugees, the organization that had previously dealt with Russian refugees in that quarter.

In September, 1923, the Council of the League adopted a settlement scheme for the Greek refugees on a productive basis which involved the raising of a loan of six million pounds sterling. The President of this autonomous Committee of four members is Mr. Henry Morgenthau, former Ambassador of the United States, who will mainly represent American relief organizations, while Colonel Campbell represents the League in Committee.

The Greek Committee of the Council met last May in London. Those present included Mr. Morgenthau, His Excellency M. Caclamanos, the Greek Minister in London, and M. Diomedes, Governor of the National Bank of Greece.

A further grant for the continuation of the work of the Commission was made, but if the Greeks hope to secure the loan necessary for the full realization of the settlement scheme, they must concentrate on securing a stable and reliable Government.

V. DR. DRAKOULES AND REFUGEE SETTLEMENT

Dr. Platon Drakoules, whose activities on behalf of the Garden City movement as the basis of a permanent settlement of the refugees were recorded in our last issue, has now prepared a draft of his scheme for submission to the League of Nations authorities entrusted with the settlement of the refugees. As one of the pioneers of the movement that started with Letchworth, Dr. Drakoules has considerable experience of the requirements and possibilities of a Garden City. His scheme is in accordance with the principles adopted by the International Garden Cities and Town-Planning Federation, which has its headquarters in London, where Greece has been represented for some years.

In the opinion of many persons with whom Dr. Drakoules has discussed the matter, the Garden City programme offers the best solution of the refugee problem. If only one Garden City or Garden City suburb

(* Agropolis is the term now adopted in Greece) could be established, the principles would be seen at work, it would be followed by others, as there are numerous refugees with means and industrial and agricultural qualifications who are anxiously awaiting some opportunity to utilize their powers. An industry started by a refugee manufacturer in the first Agropolis, maintains Dr. Drakoules, would be the signal for other sufferers from the intolerable conditions that prevail to begin life anew in virgin places, on satisfactory lines of work. One of the first requisites of an Agropolis is to secure an industry of some kind, so as to attract settlers, and there would be refugees and others eager to become the first settlers.

Of course it is possible to have an Agropolis consisting of refugees only, and one mixed, as well as one consisting exclusively of non-refugees. The point is that the movement would soon solve the problem of settling the refugees, and settling them on solid foundations. The founding of only one Agropolis would be the beginning of the solution. The first must be a success to convince all of the truth of the proposition. To be a success it must secure all the elements of a veritable community, with social life representing all the classes necessary to constitute a living social organism. Dr. Drakoules proceeds to outline the practical details of the scheme, and points out that, while co-operative principles will be the rule, private initiative will remain unhampered, and there will be a system of old age pensions and insurance of workers.

His friend Mr. Dasios, late Governor-General of Thrace, has carried out valuable work there which is decidedly towards the Garden City ideal. He has given similar direction to the building of the new villages, some of which have been endowed with 200 acres of mulberry trees in order to develop the silk industry.

Dr. Drakoules is confident of the financial strength and stability of the Agropolis, once it is created. The immediate problem consists in obtaining funds for the starting, and in securing a suitable locality. The draft of Dr. Drakoules' scheme will be submitted by him to the International Garden Cities and Town-Planning Congress, meeting at Amsterdam on July 2.

* A term adopted at the suggestion of Dr. Platon Drakoules.





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